VISION IAS

www.visionias.in

GENERAL STUDIES (TEST CODE : 1415)

Name of Candidate	Kartik Jivani		
Medium Hindi/Eng.	English	Registration Number	13245
Center	Online	Date	08/11/20

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	10	
2	10	
3	10	
4	10	
5	10	
6	10	
7	10	
8	10	
9	10	
10	10	
11	15	
12	15	
13	15	
14	15	
15	15	
16	15	
17	15	
18	15	
19	15	
20	15	

Total Marks Obtained:

Remarks:

Signature of Examiner

INSTRUCTIONS

1. Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
   उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न–पत्र कोड, विद्यार्थी क्रमांक आदि)।
2. There are **TWENTY** questions printed in **ENGLISH & HINDI**
   इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
3. **All questions are compulsory.**
   सभी प्रश्न अनिवार्य हैं।
4. The number of marks carried by a question/part is indicated against it.
   प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
5. Answers must be written in the medium authorized in the Admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in medium other that the authorized one.
   प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न–सह–उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
6. Word limit in questions, if specified, should be adhered to.
   प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
7. Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.
   उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

EVALUATION INDICATORS

1. Contextual Competence
2. Content Competence
3. Language Competence
4. Introduction Competence
5. Structure - Presentation Competence
6. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

All the Best

Don't write anything this margin (इस भाग में कुछ ना लिखें)

1. There have been arguments that direct benefit cash transfers should replace the supply of food through the public distribution system. Do you agree with such arguments? Give reasons in support of your answer.

(150 words) 10

यह तर्क दिया जाता रहा है कि प्रत्यक्ष लाभ नकद हस्तांतरण को सार्वजनिक वितरण प्रणाली के माध्यम से खाद्यान्न आपूर्ति का स्थान ले लेना चाहिए। क्या आप ऐसे तर्कों से सहमत हैं? अपने उत्तर के समर्थन में कारण बताइए।

Direct Cash Transfer involves Periodic transfer of fixed sum of money into the bank accounts of beneficiaries. Several economists have suggested it to replace PDS.

Arguments in favour

① Agency: it empowers people to choose on their own will.

② ~~Gives an~~ step away from paternalistic approach towards Rights based approach

③ PDS has poor quality of food grain issue which could be tackled with DBT

④ People can buy food item of their choice rather than getting wheat & rice only.

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

5. Could help address leakages in PDS
6. Could spur cashless economy
7. Help address concerns of exclusion error, non portability of ration card etc.

Counter Arguments

1. Money could be misused for liquor, gambling etc.
2. Doesn't account for food inflation
3. Food accessibility may be an issue in remote areas if FPS is closed.
4. Huge financial burden on government may occur.

Conclusion

Small pilot projects could be undertaken in few districts and then appropriate call should be taken in this regard to realise SDG 2 (Eradication of hunger)

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

2. What do you understand by the term 'participatory budgeting'? Identify the challenges associated with participatory budgeting in India.

(150 words) 10

आप 'सहभागितापूर्ण बजटन' शब्दावली से क्या समझते हैं? भारत में सहभागितापूर्ण बजटन से जुड़ी चुनौतियों की पहचान कीजिए।

Participatory budgeting is an old concept gaining traction in recent years due to benefits like citizen participation, efficiency and effectiveness of budget making exercise.

Participatory budgeting

① Involvement of people in budget making process

② Government's active reach out to various sections of society to understand their needs and demand before budget making.

③ Citizens' participation via pressure group, NGOs, civil society organizations etc. to meet those in power to express their demand

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(4) Active participation of people in implementation as well as monitoring of various budgetary provisions.

Ex (1) FICCI holds talks with Finance Minister before budget making

(2) Agricultural pressure groups give memorandum of demand to district collector / Govt. soliciting their demand before budget

Challenges

(1) Lack of awareness among people regarding budget making exercise

(2) People's apathy to participate due to loss of daily wage

(3) Government doesn't actively reach out to people to solicit their demand

(4) Huge illiteracy (5) Lack of Institutional mechanism

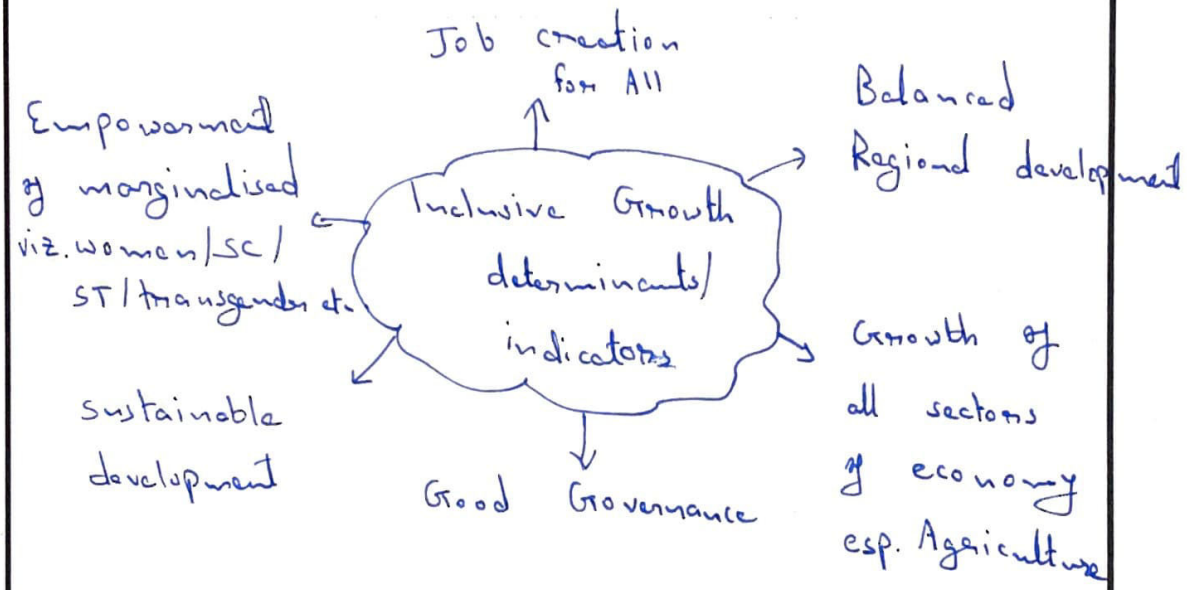
Way Forward

It's a novel idea to deepen democracy and should be adopted by govt.

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

3. Inclusive growth in an economy itself negates the need for a Universal Basic Income. Discuss in the context of India. **(150 words) 10**
किसी अर्थव्यवस्था में समावेशी विकास स्वयं ही सार्वभौमिक मूलभूत आय की आवश्यकता को नकारता है। भारत के संदर्भ में विवेचना कीजिए।

Inclusive Growth refers to a growth process whereby every section participates and in turn ~~gets~~ enjoys fruits of growth process equitably.



UBI It's an idea mooted in recent times which involves transfer of fixed sum of money in the bank of account of people every month.

How Inclusive Growth negates UBI's need?

① Major beneficiaries of UBI is poor farmers.

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

But if Agricultural development is undertaken in right spirit. It would lead to 'Doubling Farmers' income' and thus support in the form of UBI wont be required.

(2) 'Good governance' will reduce burden of bribe giving on common people and thus people will have more disposable income with them, without the need for UBI.

(3) Poverty alleviation through job creation, social empowerment etc would reduce the need for people's dependence on government for income support.

Conclusion: 'Inclusive growth' through policies/steps like agricultural development, human capital generation etc. will negate UBI need and help realise the goal of 'Sabka sath, Sabka vikas'

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

4. E-commerce holds the potential to revamp agriculture marketing in India in multiple ways. Discuss with suitable examples. **(150 words) 10**

ई-कॉमर्स भारत में अनेक तरीकों से कृषि विपणन में सुधार लाने की क्षमता रखता है। उपयुक्त उदाहरणों के साथ विवेचना कीजिए।

E-commerce refers to marketing/ selling of goods/services through digital/ electronic mode.

How e-commerce can help in Agri. marketing?

① Provide wider market to farmers as opposed to present fragmented market (i.e. selling to local APMC mandis)

Ex e-NAM provides Nationwide market to farmers.

② Help cut intermediaries / middlemen

Ex

Today : farmer → local trader → APMC trader → Wholeseller → Retailer → consumer

E-commerce : farmer → e-commerce collection centre → consumer

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(3) Farmers can get better return for their produce as opposed to present day exploitation by local traders.

(4) e-commerce marketing can help spur food processing industry, thereby ultimately helping farmers as well as larger economy through job creation, export etc.

(5) Can help reduce food wastage due to better supply chain of e-commerce.

(6) Reduced food inflation will ultimately benefit final consumer. It's achieved due to efficient backward and forward linkage and associated cost reduction.

Way Forward

Expeditious implementation of e-NAM holds the key to Agri. marketing reforms.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

5. While digital financial services can expand financial inclusion in India, there are various challenges that need to be addressed in this regard. Discuss. **(150 words) 10**

जहां डिजिटल वित्तीय सेवाएं भारत में वित्तीय समावेशन का विस्तार कर सकती हैं, वहीं इस संबंध में विभिन्न चुनौतियों का समाधान किए जाने की आवश्यकता है। विवेचना कीजिए।

Financial Inclusion refers to access to bank account along with bouquet of financial products like credit/insurance/pension etc. in an affordable manner.

How Digital financial services can help in financial Inclusion?

① Access to multiple financial products from mobile itself can help expand their coverage.

② Convinience of remittance transfer/cash transfer etc. from bank App.

③ Effective Grievance Redressal through ~~in~~ Bank's Application itself can help build trust.

④ Help address lacunae of lack of brick and mortar bank presence in remote/

Don't write anything this margin (इस भाग में कुछ ना लिखें)

rural areas.

Challenges

1. Increasing financial fraud ⇒ trust of people in digital technology declining
2. Lack of digital literacy
3. Digital Divide – no internet connectivity, electricity availability etc in rural areas
4. Digital financial products are more suited to urban middle class and not for farmers / MSME / SHG etc. limit its potential.
5. Language issue

Way Forward

1. Beef up cyber security Architecture in the country.
2. Digital literacy programs through specific audience based module creation, PMGDISHA etc

Digital financial Inclusion would ultimately help realise Inclusive Growth

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

6. COVID-19 has exposed gaps in India's domestic laws to deal effectively with outbreaks of infectious diseases, especially pandemics. Discuss.
(150 words) 10

कोविड-19 ने संक्रामक रोगों, विशेष रूप से महामारियों के प्रकोप से प्रभावी ढंग से निपटने में भारत के घरेलू कानूनों में व्याप्त अंतरालों को उजागर किया है। विवेचना कीजिए।

Recent COVID 19 Outbreak had led to witness of scrambling of Central and state governments due to difficulty in its containment, partly due to weak laws.

Gaps in Domestic laws to handle pandemic

① Epidemic Disease Act 1897:

① Doesn't define 'infections', 'epidemic' etc.

② No clear role, responsibility assignment to central and state governments

③ No Rights of people mentioned
Ex Despite police excess during lockdown, people had no recourse

④ Gives too much power to governments but without any accountability.

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

(2) Disaster Management Act 2005 :

(1) Doesnt talk about role of media, NGOs etc. and thus their integration in responding to COVID19 was difficult.

(3) Constitution has no express provision/subject of 'Disaster Management' in VII th Schedule and thus there was Centre - State conflict witnessed in deciding lockdown, taking decision regarding red/yellow zoning etc.

(4) No legal protection to health personnel earlier leading to events like attack on doctors

Way Forward

Lapsed Bills dealing with Pandemic introduced in 2010 and 2017 in Parliament should be revived and passed expeditiously to better handle future pandemics.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

7. Highlight the need for increasing private sector participation in space sector in India. Enumerate the steps taken by the government recently in this regard. **(150 words) 10**

भारत में अंतरिक्ष क्षेत्रक में निजी क्षेत्र की भागीदारी को बढ़ाने की आवश्यकता पर प्रकाश डालिए। इस संबंध में हाल ही में सरकार द्वारा उठाए गए कदमों को सूचीबद्ध कीजिए।

Government has given thrust to private sector participation in space under 'Atmanirbhar Bharat' initiative.

Need

1. To cater to increasing demand for satellite launch from Universities / pvt sector etc.

2. To bring in efficiency, technology, innovation etc. with private sector entry.

3. Compliment ISRO through production of satellite components, Launch Vehicles etc.

4. Reduce burden on ISRO, which could now better focus on R&D, inter-planetary missions, human space flight program etc.

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

(5) Increase India's share in global space sector and thus bring in Foreign exchange through increased Exports

(6) Job creation, Infrastructure creation, development of students' interest in space sector etc.

Steps taken

(1) New Commercial wing of ISRO created named 'New Space India Limited' to assist in manufacturing of SSLV, PSLV

(2) Autonomous Regulatory body 'In-Space' created under Department of space to facilitate pvt sector participation

(3) Private sector's Entry allowed under recent 'Atmanirbhar Bharat package'

(4) 'Space Activities Bill 2017' to facilitate Private participation.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

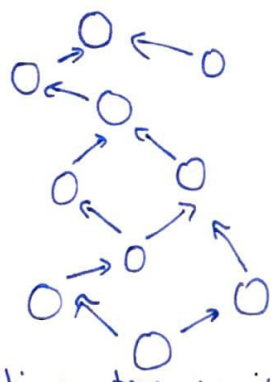
8. What do you mean by herd immunity? Also discuss the problems with primarily relying on this approach to stop the spread of infectious diseases. **(150 words) 10**

हर्ड इम्यूनिटी से आप क्या समझते हैं? साथ ही, संक्रामक रोगों के प्रसार को रोकने के लिए मुख्य रूप से इस दृष्टिकोण पर निर्भर होने से संबंधित समस्याओं की भी विवेचना कीजिए।

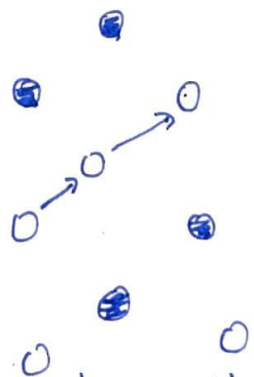
Recent COVID 19 outbreak and UK's earlier approach towards tackling it through herd immunity development has led to spotlight on it.

Herd Immunity

Refers to a scenario where many people have developed antibodies of COVID 19 via either getting exposed to the disease or immunisation. This results in reduction of 'doubling rate' of disease due to breakage in transmission chain.



Active transmission



Herd Immunity

● having antibody

○ No antibody

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

Problems associated with it

① No clear understanding as to ~~when~~ ~~how~~ what % of people must be exposed to achieve herd immunity

② May not be long lasting

Ex Recent cases of second time infection of COVID19 reported

③ To realise it, country should allow active spread of disease among people which raises Ethical concerns i.e. akin to country reneging on its responsibility to check disease spread.

④ During the process, many deaths/illnesses may occur

⑤ Takes long time for herd immunity development

Way Forward Herd immunity attainment through Immunisation should be the approach.

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

9. Despite the acknowledgement of terrorism as a global concern, the Comprehensive Convention on International Terrorism is yet to be adopted. What are the reasons and implications of this impasse?

(150 words) 10

आतंकवाद को एक वैश्विक चिंता के रूप में स्वीकार करने के बावजूद, अंतर्राष्ट्रीय आतंकवाद पर व्यापक अभिसमय को अभी तक नहीं अपनाया गया है। इस गतिरोध के कारण और निहितार्थ क्या हैं?

CCIT is the proposed convention at UNGA by India in 1996 to address global terrorism.

Reasons for its non adoption

① Lack of concensus over definition of Terrorism

Ex A person could be terrorist for some people, whereas he could be freedom fighter for others.

② Resistance from USA. It fears that its foreign operations in countries like Afghanistan, Syria may be labelled as terrorism.

③ Latin American countries oppose it as

Don't write anything this margin (इस भाग में कुछ ना लिखें)

civil wars against despotic leader there may be construed as terrorism

(4) International community view CCIT as India's step to realise its strategic goal of tarnishing image of Pakistan and thus many OIC countries oppose it.

Implications of this Impasse

(1) No Universally accepted terrorism definition leading to inaction to address global terrorism

(2) Rise in terrorism globally
Ex ISIS, recent France attacks

(3) Increasing cross border terrorism with immunity Ex Pathankot Attack

(4) No curb on arm transfer, Fund transfer, movement restriction on terrorists.

Way Forward India should pursue CCIT passage through diplomatic outreach to address the menace.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

10. In view of the need for effective border management necessitated by complexity of prevailing challenges, India needs to reform its Border Security Force (BSF). **(150 words) 10**

विद्यमान चुनौतियों की जटिलता द्वारा अनिवार्य बनाए गए प्रभावी सीमा प्रबंधन की आवश्यकता को देखते हुए, भारत को अपने सीमा सुरक्षा बल (BSF) में सुधार लाने की आवश्यकता है।

Border Management refers to an act of guarding border from illegal movement of people/goods and give the sense of safety to border residing people.

Complexity ~~of prevailing~~

① Vastly different terrain across border viz. desert, plain, mountain etc.

② Frequent destruction of fences due to avalanche

③ Rivers criss crossing the border

Prevailing challenges in BSF

① Shortage of manpower: despite being 2 lakh + manpower, it's still insufficient given the vast responsibility.

② Dual responsibility viz. guarding Pakistan as well as Bangladesh border

Don't write anything this margin (इस भाग में कुछ ना लिखें)

③ Poor Infrastructure availability i.e. shortage of Night vision cameras, ground sensors, patrol vehicles etc.

④ Poor treatment to BSF commandos.
Ex Allegation of poor food quality video had come out recently

⑤ Ineffective internal Grievance Redressal mechanism

⑥ IPS v/s BSF tussle

Suggestions

① New Border guarding force creation other than BSF to realise 'One Border, One Force'.

② Budgetary support should be enhanced to equip BSF with modern Equipments

③ Effective Internal Grievance redressal mechanism, better housing/salary/shelter to boost morale

④ BSF shouldn't be diverted for internal security challenges

Conclusion | Comprehensive BSF Reforms is the key to realise Effective Border Management.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

11. Though privatization is considered as a prominent component of economic reforms, India has been ambivalent on the subject even in the post reform period. Discuss.
(250 words) 15
यद्यपि निजीकरण को आर्थिक सुधारों का एक प्रमुख घटक माना जाता है, तथापि सुधारोपरांत अवधि में भी भारत इस विषय पर दुविधा की स्थिति में रहा है। विवेचना कीजिए।

Privatisation has been adopted as a key Reform initiative of India right since 1991 LPG Reforms.

Privatisation | It refers to government selling its share in PSU to private sector/ public through various mechanisms like IPO/ FPO/ ETF/ private placement etc.

Why it's prominent component of reform?

Multiple benefits associated with privatisation make it a prominent Reform i.e.

1. Better Efficiency, profitability
2. Realise 'Minimum government, maximum governance'
3. Return on Asset is more if it's handled

Don't write anything this margin (इस भाग में कुछ ना लिखें)

by private sector

(4) Enhanced fiscal space of govt which could be spent on social spending

(5) innovation, better technology introduction etc. through private management.

How India has been Ambivalent? Post 1991

(1) No major 'Strategic sale' in 1990s decade despite policy of LPG adopted in 1991.

(2) Last major strategic sale was in 2002/03 of Maruti and few other PSUs and since then again momentum is low

(3) Despite NITI Ayog's detailed Report listing PSUs for Privatisation in 2018, No major implementation undertaken in last two years.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

However it's not just the case of reluctance on the part of government, rather market conditions coupled with other reasons ~~ha~~ prevented meaningful privatisation. For instance,

① 2008 Global financial crisis, 2019 Economic slowdown, 2020 COVID pandemic etc. created market fall whereby good price/return cant be expected through privatisation and thus plan was shelved.

② People's reluctance of the idea of privatisation/ political reasons/ socialist objectives etc. are other reasons holding back privatisation.

Way Forward

Relaxation in Air India privatization conditions, Atmanirbhar bharat package announcement of privatisation etc. highlight ~~the~~ renewed political will. This must be realised to usher in 5 tn $ Economy goal.

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

12. Highlighting the potential of micro and small enterprises in the food processing sector, enumerate the challenges that they face. In this regard, discuss the importance of the Scheme for Formalisation of Micro Food Processing Enterprises (FME). **(250 words) 15**

खाद्य प्रसंस्करण क्षेत्रक में सूक्ष्म और लघु उद्यमों की क्षमता पर प्रकाश डालते हुए, उनके द्वारा सामना की जाने वाली चुनौतियों को सूचीबद्ध कीजिए। इस संबंध में सूक्ष्म खाद्य प्रसंस्करण उद्यम औपचारीकरण (FME) योजना के महत्व की विवेचना कीजिए।

Food processing sector refers to a sector dealing with value addition of food products to realise enhanced shelf life, better returns to farmers and higher Exports.

Potential of micro and small enterprises

① Rising Urbanisation and demand for packed food

② Increasing Nuclear family and working couple leading to enhanced demand

③ Increasing Westernisation and change in food habit

④ Rising disposable income in India

⑤ ~~Variety~~ Almost all varieties of agricultural

Don't write anything this margin (इस भाग में कुछ ना लिखें)

crops available in India, thereby giving assured quality raw material supply

All these potential factors bode well for micro and small enterprises to take up food processing.

Challenges faced by them

1. Lack of credit availability due to NPA crisis, NBFC liquidity crisis
2. Lack of availability of skilled workers
3. Inability to compete with big FMCG giants
4. Poor branding, innovation etc. leading to poor market access for their products
5. Lack of economics of scale leading to high cost of product
6. Lack of capacity to Export their products

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(7) Availability of Infrastructure viz. water, electricity, pollution treatment facility etc. is an issue.

Importance of FME Scheme

FME Scheme of Ministry of Food Processing Industry would help in following ways:

(1) Formalisation would facilitate access to cheap credit from Banks/NBFC.

(2) Formalisation would help attract talents like food engineers to micro enterprises thereby boosting productivity.

(3) Formalisation would help create Backward and Forward linkages, thereby ensuring access to timely and quality raw materials as well as market.

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

13. Discuss the significance of micro-irrigation in a situation of water crisis in India. Also, mention the challenges with regard to adoption of micro-irrigation systems in India. **(250 words) 15**

भारत में जल संकट की स्थिति को देखते हुए सूक्ष्म सिंचाई के महत्व की विवेचना कीजिए। साथ ही, भारत में सूक्ष्म सिंचाई प्रणालियों को अपनाने से संबंधित चुनौतियों का भी उल्लेख कीजिए।

Micro irrigation refers to a system of irrigation characterised by low pressure - low flow rate of water at high frequency to desired soil location.

Micro Irrigation system
- → Sprinkler Irrigation
- → Drip Irrigation

Significance of Micro Irrigation

① Water saving : better water use efficiency in case of micro irrigation systems

② Reduce ~~leakage~~ leaching of water underground and thus helps retain minerals like Iron, Aluminium in top soil, unlike

Don't write anything this margin (इस भाग में कुछ ना लिखें)

traditional irrigation whereby these minerals are drained out.

(3) Fertigation: i.e. dissolution of fertilisers and supplying it with micro irrigation practise results in efficient fertiliser utilisation.

(4) Micro irrigation checks runoff and thus prevent underground water pollution, river water pollution through Eutrophication etc.

(5) Higher crop yields have been witnessed with use of micro irrigation

(6) check soil hardening / soil erosion etc. as in case of flood irrigation

Challenges with Micro irrigation

(1) High Initial cost due to laying down of elaborate pipe network / pump etc.

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

(2) Not suitable for crops like wheat, rice etc which is majorly grown in India

(3) lack of awareness among farmers

(4) Requires perfectly even field and thus additional burden on farmers before its adoption

(5) choking issue due to dissolved impurity in pipe

(6) Pipe network makes use of tractor/ mechanisation difficult

(7) Requires frequent maintainance of pipes

Way Forward With India facing its 'worst water crisis in entire history' (NITI Ayog) it's high time we adopt Micro-irrigation through suitable government support.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

14. India needs to integrate energy technology innovation in its broader energy policy. Highlighting its significance, mention the steps taken by government in this regard. **(250 words) 15**

भारत को अपनी व्यापक ऊर्जा नीति में ऊर्जा प्रौद्योगिकी नवाचार को एकीकृत करने की आवश्यकता है। इसके महत्व पर प्रकाश डालते हुए, इस संबंध में सरकार द्वारा उठाए गए कदमों का उल्लेख कीजिए।

21st century being a 'knowledge century', it's imperative that all sectors esp. Energy sector adopts innovation.

Energy technologies

① Coal based Energy: Supercritical Rankine cycle based technology, Flue gas Desulphurisation, cyclone separator etc.

② I.C. Engine / Automobile: Diesel Particulate filter technology, e-vehicle technology

③ Solar Energy: graphene based PV modules, Energy storage technology

④ Biomass based Energy: Waste to Energy technology

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

Significance of Energy technology Innovation

① Facilitate Adoption on commercial scale

Ex Wind / solar energy has the issue of Energy storage which could be address through innovation

② Cost reduction and affordability: Innovation could reduce cost of energy generation

Ex Solar PV cells price dropped drastically in recent times due to better technology of manufacturing in China.

③ Reduce Emission / Green House Gases:

Ex Innovations can help reduce pollution from coal power plants

④ Newer form of Energy to realise 'Energy Security'

Ex Innovations can help realise wave energy, Nuclear fusion Energy, OTEC energy etc. which are till now not commercially viable.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Steps taken by govt

① India is founding member and leading efforts under 'Mission Innovation' which seeks ~~to~~ innovation in Energy.

② FAME scheme, National Mission on Electric Mobility have integrated R&D component in e-vehicle development.

③ Under 'Stand Up India', government is incubating startups doing innovation in Energy sector

④ Draft National Energy policy, National hybrid solar-wind policy etc have R&D components integrated.

Way Forward Innovation in Energy sector holds the key to realise SDG 7 (Affordable Energy to All)

Don't write anything this margin (इस भाग में कुछ ना लिखें)

15. Discuss how the idea of Aatmanirbhar Bharat goes beyond the traditional view of self-reliance. **(250 words) 15**

चर्चा कीजिए कि आत्मनिर्भर भारत का विचार किस प्रकार आत्मनिर्भरता के पारंपरिक दृष्टिकोण से परे है।

COVID 19 and associated economic distressed led to government focussing on 'Atmanirbhar Bharat' with the objective of self reliance.

	Atmanirbhar Bharat	Traditional view of self reliance
1	Can be understood through government's recent announcements	Can be understood through pre-1991 policies esp. economic policies adopted by India in 1950s and 1960s.
2	No stress on closing down the border	Stressed on closed Economy through high tariffs, Import substitution policies etc.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(3)	Focus is integration in Regional and Global value chains.	No such focus. Rather focus was on developing self sufficiency in every sector.
(4)	Stress on capitalising on India's strengths like pharmaceutical sector, IT Sector, etc. to enhance export via developing cost-competitiveness	Stressed on domestic capacity building on all sectors irrespective of the fact that in some sectors it would have been easy to rather Import.
(5)	Self reliance through facilitation / deregulation Ex space sector opened up to private sector, coal commercialisation	Self Reliance through forced / imposed means Ex 5 year plans, licensing, quota etc. to force private sector to produce

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

(6)	Call on 'vocal for local' i.e. use of persuation to people to buy local goods/services	~~Use~~ Imposition via closing down market for Import
(7)	Self Reliance in all sectors viz. Agriculture, MSME, Animal husbandry etc	Self Reliance majorly in heavy industries only Ex 2nd Five Year Plan

Conclusion

Present approach of self reliance under Atmanirbhar bharat is quite broad, going well beyond traditional view in terms of scope, objective, principles and intended outcome. Need of the hour is to couple it with suitable structural reforms to realise this Vision.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

16. The increased frequency and intensity of climate extremes in the Indian subcontinent can have grave implications. Comment. Also, suggest some measures that can be taken towards building climate-resilience in India. **(250 words) 15**

भारतीय उपमहाद्वीप में जलवायु की चरम स्थितियों की बढ़ती आवृत्ति और तीव्रता के गंभीर निहितार्थ हो सकते हैं। टिप्पणी कीजिए। साथ ही, भारत में जलवायु-प्रत्यास्थता निर्माण की दिशा में उठाए जा सकने वाले कुछ कदमों का भी सुझाव दीजिए।

As per 5th Assessment Report of IPCC, Climate change is projected to have devastating consequences on Indian subcontinent due to increased frequency and intensity of extreme events.

Increased frequency & intensity

① Large number of floods witnessed in recent times Ex Hyderabad, Pune floods (2020)

② Super cyclone Amphan hit West Bengal

Implications on Indian subcontinent

① Social:

(1) Increase in internal migration and conflict with natives due to flood, drought etc.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

② Intense fighting over resources as resources getting depleted due to climate change Ex frequent droughts leading to water stress

② Economic :

① Increase in poverty due to disasters

② Loss of Agricultural yield due to cyclone, flood etc & destruction of crops

③ High health expenditure on govt due to rise of vector borne disease due to frequent Heat waves

③ International :

① Sea level rise, ~~due~~ coastal flooding may lead to influx of Bangladeshi refugees leading to conflict b/w India - Bangladesh

④ Political : Rise in inter state conflicts over river water sharing

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Measures to build climate Resilience

① Promote R & D in Agriculture to develop better crop varieties resistant to pest attack / water stress etc.

② Undertake comprehensive study on impact of climate change. Do vulnerability Assessments.

③ Promote water use efficiency, promote 3R principle, undertake river water linking to tide over projected water stress.

④ Promote Disaster Resilient Infrastructure to withstand extreme events.

Way Forward Government must focus on Adaptation through suitable policy measures to realise Climate Resilient India.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

17. Approach to flood control in India should evolve from piecemeal measures to an integrated basin management. Comment. **(250 words) 15**

भारत में बाढ़ नियंत्रण के लिए खंडित रूप में उपाय करने वाला दृष्टिकोण क्रमिक रूप से एकीकृत बेसिन प्रबंधन के रूप में विकसित होना चाहिए। टिप्पणी कीजिए।

Flood has been the recurrent phenomenon in India, witnessed even recently in many parts of the contry.

Piecemeal Measures of flood Control

1. Creation of dams, embankments on river.
2. Afforestation program on some riverfronts
3. Developing flood warning system for only few cities while neglecting other areas.
4. Ad-hocism in building development plans at local levels.
5. Desiltation of rivers, reservoirs during Emergency situation.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Integrated Basin Management

It involves taking entire watershed i.e. catchment area as single unit and then design suitable policy.

How it's more prudent approach?

1. Rivers dont recognise political boundaries
2. All waters in entire region ultimately flow into the river thus it's more logical approach.

Mechanism / tools

1. Watershed development plans at basin level
2. Creation of River Board for management under River Board Act 1956
3. Interstate cooperation in Dam management
4. Hydrological data sharing on water inflow

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

and outflow between states and nations.

(5) Adoption of Floodplain Zonation Bill 1975.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

18. What do you understand by Convalescent Plasma Therapy? Enumerate the potential uses and concerns in its application. **(250 words) 15**
कॉन्वलेसंट प्लाज्मा थेरेपी से आप क्या समझते हैं? इसके संभावित उपयोगों और अनुप्रयोग में सम्मिलित चिंताओं का उल्लेख कीजिए।

Convalescent Plasma therapy has been in news due to its potential in treatment of COVID19 patient.

Plasma therapy

Refers to injection of plasma from Donor to Recipient to boost immunity

Process

Blood taken from donor having antibody against a disease

⇓

fractionation undertaken on blood to separate Plasma having antibodies

⇓

Injected into the blood of donor

⇓

Passive Immunity

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

Potential Uses

① Develops immunity to variety of diseases like malaria, dengue, COVID19 etc.

② Especially suitable for those having weak immunity like old age people, new born baby etc.

③ Reduces Mortality

④ Reduces secondary complications

Concerns

① Blood group must match otherwise complications may arise

② Possibility of allergy in recipient

③ Blood oozing possibility in recipient

④ Not a foolproof technique

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

19. Given the diverse security challenges as well as external and internal linkages, developing a National Security Strategy for India requires a comprehensive approach. Explain. **(250 words) 15**

विविध सुरक्षा चुनौतियों के साथ-साथ बाह्य और आंतरिक जुड़ाव को देखते हुए, भारत के लिए राष्ट्रीय सुरक्षा रणनीति विकसित करने हेतु एक व्यापक दृष्टिकोण अपनाए जाने की आवश्यकता है। स्पष्ट कीजिए।

National Security Strategy

① Must identify all security challenges clearly

Internal security
- → Naxalism
- → J & K militancy
- → North East Insurgency
- → terrorism

External security
- → fake currency
- → cross border terrorism
- → Organised crime syndicate

② Must recognise linkages between Internal and External securities

Ex ① Organised crime syndicates understating terrorism in India – 1993 Mumbai bombing

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(2) External state actors (China, Pakistan) assisting Naxalists, insurgents

(3) State sponsored terrorism

(3) Robust Security Architecture should be laid down

(4) Emerging challenges like cyber crime, deep fakes, fake news etc. should be covered

(5) Security should be understood in broad sense including Health security, economic security etc.

(6) Effective Border management is central to National Security

Don't write anything this margin (इस भाग में कुछ ना लिखें)

20. What do you understand by Critical Information Infrastructure? Highlight the significance of Critical Information Protection and state the measures taken to ensure the same. **(250 words) 15**

महत्वपूर्ण सूचना अवसंरचना से आप क्या समझते हैं? महत्वपूर्ण सूचना संरक्षण के महत्व पर प्रकाश डालिए और इसे सुनिश्चित करने के लिए उठाए गए कदमों का उल्लेख कीजिए।

Critical Info. Infra

Those Infra. which if attacked could have debilitating impact on society, economy as a whole

Ex Air traffic controller, Nuclear power plant, Electricity grid, Dam Management system

Significance of protection

① Economic growth hinges on it

② Destability may lead to disaster

Ex Dam failure may lead to flood

③ Can destabilise day to day activity if attacked

Ex Air traffich may come to halt

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

if Air traffic controller hacked

Measures taken

① Critical Info. Infra. Protection Centre has been established

② National cyber coord^n Centre

③ National cyber security policy 2013 recognises CII's importance

VISION IAS

www.visionias.in

GENERAL STUDIES (TEST CODE : 1417)

Name of Candidate	Kartik Jivani		
Medium Hindi/Eng.	English	Registration Number	13245
Center	Online	Date	29/11/20

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	10	
2	10	
3	10	
4	10	
5	10	
6	10	
7	10	
8	10	
9	10	
10	10	
11	15	
12	15	
13	15	
14	15	
15	15	
16	15	
17	15	
18	15	
19	15	
20	15	

Total Marks Obtained:

Remarks:

Signature of Examiner

INSTRUCTIONS

1. Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
   उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न–पत्र कोड, विद्यार्थी क्रमांक आदि)।
2. There are **TWENTY** questions printed in **ENGLISH & HINDI**
   इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
3. **All questions are compulsory.**
   सभी प्रश्न अनिवार्य हैं।
4. The number of marks carried by a question/part is indicated against it.
   प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
5. Answers must be written in the medium authorized in the Admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in medium other that the authorized one.
   प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न-सह उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
6. Word limit in questions, if specified, should be adhered to.
   प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
7. Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.
   उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

EVALUATION INDICATORS

1. Contextual Competence
2. Content Competence
3. Language Competence
4. Introduction Competence
5. Structure - Presentation Competence
6. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

All the Best

Don't write anything this margin (इस भाग में कुछ ना लिखें)

1. Dadabhai Naoroji left an indelible imprint on the national movement. Explain.
(150 words) 10
दादाभाई नौरोजी ने राष्ट्रीय आंदोलन पर एक अमिट छाप छोड़ी। स्पष्ट कीजिए।

Dadabhai Naoroji - 'the Grand Old man of India' was the foremost of the Nationalist, who contributed immensely to the freedom struggle.

Indelible imprint

① Served 3 times as President of Indian National Congress

② Was instrumental in bringing together Moderates and Extremists, especially during 1906 Calcutta Session (which he presided)

③ Gave 'International ~~co~~ colour' to Nationalist struggle through his work in Britain

④ Raised exploitative policies of colonial government in UK's Parliament, where

Don't write anything this margin (इस भाग में कुछ ना लिखें)

he was an MP from Labour Party

(5) Strived for Indian interest through establishing East Indian Association in UK

(6) Worked for social Reforms in India, esp. against woman violence, caste system etc through series of Articles in his journal Rastgoftar

(7) Instrumental in Religious Reform movement in Parsi through being a founding member of 'Rehnumai Mazdayasan Sabha'

This way, Dadabhai Naroji was held in great respect by both Moderates as well as Extremists and contributed immensely to Nationalist movement.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

2. The Quit India movement marked a new direction in the struggle against the British colonial rule in India. Analyse. (150 words) 10
भारत छोड़ो आंदोलन ने भारत में ब्रिटिश औपनिवेशिक शासन के विरूद्ध संघर्ष में एक नई दिशा को चिन्हित किया। विश्लेषण कीजिए।

Quit India Movement (QIM) was the mass movement launched by Gandhiji, envisaged as the 'Final struggle' against the Colonial British government.

How it marked new direction?

① Geographical Reach: Earlier movements like Non cooperation movement (NCM) and Civil disobedience movement (CDM) had limited geographical reach (largely urban areas). Whereas QIM predominantly reached even rural areas.

② Participation: wide participation by almost all sections - workers, peasants, women, Industrialists etc. made it different from Earlier ones

anything this margin (इस भाग में कुछ ना लिखें)

(3) Parallel governments: were formed in Satara (Chittu Pandey), Balia etc. which was unique feature of QIM.

(4) Call for 'Do or Die': Earlier movements were largely advocating non-violent/peaceful means. Whereas, in QIM Gandhiji categorically shifted his stance.

(5) Violent movement involving destruction of public property, strikes etc. which was unique as compared to earlier movement.

(6) Underground leadership by Aruna Asaf Ali, JP Narayan, Ram Manohar Lohiya etc unlike earlier movements

(7) Women leadership by Usha Mehta, Aruna Asaf Ali etc. (Earlier movements largely made led)

This way QIM saw the watershed shift from earlier approach.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

3. The end of World War II marked the birth of a new international order. Examine. (150 words) 10
द्वितीय विश्व युद्ध के अंत ने एक नई अंतर्राष्ट्रीय व्यवस्था को जन्म दिया। परीक्षण कीजिए।

End of World War II in 1944-45 resulted in new International Order establishment, which is more or less continuing till date.

Birth of new International Order

Why new order?

① To prevent Future World Wars

② Forge international cooperation and bonhomie

③ check secret negotiation in diplomacy which was partly a Cause behind World War II

④ Provide for rapid development globally after all-round destruction due to World War II

New International Order:

① Creation of Bretton woods Institutions -

VISION IAS™

Don't write anything in this margin (इस भाग में कुछ ना लिखें)

World Bank, IMF, GATT etc. to forge global cooperation in financial and developmental matters.

② Democratisation of International Relations

Newly independent Asian and African nations got their voices heard for the first time

③ Wave of Decolonisation in Asian and African countries

④ Decline of power of European continent which was major Imperial power

⑤ Bipolar World order establishment with US & USSR dominance

⑥ Cold War and grouping of world into 2 major military blocks

⑦ NAM - Non Aligned Movement started

WW II indeed was a major event which shaped the future in prominent way

Don't write anything this margin (इस भाग में कुछ ना लिखें)

4. The Simla Agreement (1972) and Lahore Declaration (1999) are two key milestones in the history of the Indian subcontinent. Discuss.

(150 words) 10

शिमला समझौता (1972) और लाहौर घोषणा-पत्र (1999) भारतीय उपमहाद्वीप के इतिहास में दो महत्वपूर्ण उपलब्धियां हैं। चर्चा कीजिए।

Shimla Declaration (1971) post 1971 India-Pakistan War and Lahore Declaration (1999) in the context of Indo-Pak Relationship were two major events in post independence Indian history.

How they were milestones?

Shimla ~~A~~ Agreement (1972):

① Pakistan recognised Bangladesh's independence and thus was a jolt to its earlier propaganda of 2-nation theory

② Pakistan's acceptance of defeat and Indian upper hand in Shimla negotiations enhanced India's international image

③ Ceasefire line converted into LoC

Don't write anything in this margin (इस भाग में कुछ ना लिखें)

and thus paved way for lasting peace along border with reduction in violence

(4) J & K issue was sought to be addressed in a Bilateral manner without involving other international players which was in line with long stated Indian policy

Lahore Declaration (1999)

(1) Sustained Dialogue between India and Pakistan started, which was ~~by~~ key to peace and stability in the Indian subcontinent

(2) Grave boost to bilateral trade, people to people exchange (cooperation (Lahore Bus service), cross LOC trade etc. which marked reduction in hostility

Despite these 2 major events, issues like cross border terrorism, mutual hostility etc has prevented peace in the Region which needs to be addressed through strong Poli

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

5. Social security should not only involve economic empowerment but also social empowerment. Discuss in the context of India. **(150 words) 10**
सामाजिक सुरक्षा में न केवल आर्थिक सशक्तीकरण अपितु सामाजिक सशक्तीकरण भी सम्मिलित होना चाहिए। भारत के संदर्भ में चर्चा कीजिए।

Social security as per 'International Labour Organisation' refers to a support system to an individual which seeks to minimize risk and enhance standard of living.

Economic empowerment through social security

① Pension, provident fund provides for better economic standard post retirement

② Unemployment allowance hedges risk against job loss in the context of rising Automation

③ Health insurance provides cushion against catastrophic health expenditure and associated slipping into poverty.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Social Empowerment via social security

① Maternity Benefit → provision allows for more female labour force participation, which is in tune with women empowerment objective

② Social security is most needed in case of marginalised sections engaged in Unorganised and informal sectors thereby a tool towards social empowerment

③ Social security under 'National Social Assistance program' achieves social empowerment via giving pension to widow, old age people etc.

Way Forward

- Formalisation of economy needed to cover more people under social security Net
- Insurance should be expanded to include all sections of society
- Effective implementation of recent Labour Code on Social Security.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

6. Explain with examples how globalisation is manifested in both local in the global and the global in the local. **(150 words) 10**
उदाहरण देते हुए स्पष्ट कीजिए कि वैश्वीकरण वैश्विक में स्थानीय और स्थानीय में वैश्विक, दोनों में किस प्रकार प्रकट होता है।

Globalisation refers to increasing interconnectedness and exchange / flow of ideas / culture / goods / services / people etc. across various countries of the Globe.

Local in the Global

It refers to the phenomenon of global goods / ideas / services adopting local ideas / culture, thus better suiting local needs through integrating them

Examples:

① McDonald's selling Aloo Tikki Burger and Paneer Tikka burger, incorporating local cuisines

② Many ~~for~~ global food chains (KFC, Dominos etc) go vegetarian during Navratri respecting local tradition.

Don't write anything in margin (इस भाग में कुछ ना लिखें)

③ Fusion in dress like Kurta and Jeans

④ Mixed hybrid language use like Hinglish - English + Hindi Mix

Glocal in the Local

It refers to local products going global due to influence of Globalisation.

Examples:

① Yoga getting popularised in Western countries

② Many World leaders adopted 'Namaste' over 'hand shake' in view of COVID 19

③ Classical dance, music etc getting popularity abroad

Thus, Globalisation operates on 'Give and Take principle', adopting Best of both Worlds, giving rise to Glocalisation.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

7. In light of persistence of various forms of violence against women in India, discuss the ways in which the issue can be addressed effectively.
(150 words) 10

भारत में महिलाओं के विरूद्ध हिंसा के विभिन्न रूपों की विद्यमानता के आलोक में, उन उपायों की विवेचना कीजिए जिनसे इस मुद्दे का प्रभावी ढंग से समाधान किया जा सकता है।

Crime against women is continuously on rise as witnessed from NCRB data. Recent COVID19 pandemic and rise in 'domestic violence' further proves the point.

Various forms of violence against women
- Birth → female foeticide, female infanticide
- Adolescent: Rape, child marriage, female genital mutilation
- Adult: domestic violence, abuse at workplace, cyber stalking etc.

Ways to address the Issue

① Effective implementation of existing laws like Domestic Violence Act 2005, Sexual harassment of women at workplace Act 2013 etc.

Don't write anything in this margin (इस भाग में कुछ ना लिखें)

(2) Use of Technology: like Himmat App of Delhi police should be replicated elsewhere

(3) Training in self defence to women through assistance from NGO, NCC cadets etc.

(4) Easy and Effective Reporting Mechanism for crime.

Ex: NCW has launched Whatsapp number to report Domestic violence case. More such steps needed

(5) Criminal Justice system reforms for zero tolerance and deterrance through assured conviction

(6) Male need to raise voice for women's cause on line of 'He for She campaign' to root out Patriarchy.

Thus, strategies involving social/political/economic dimensions is need of the hours to realise 'Sabka Saath, Sabka Vikas'

Don't write anything this margin (इस भाग में कुछ ना लिखें)

8. What is an urban forest? Highlight its benefits and steps taken by the government to promote urban forestry in India. **(150 words) 10**
शहरी वन क्या हैं? इनके लाभों और भारत में शहरी वानिकी को बढ़ावा देने के लिए सरकार द्वारा उठाए गए कदमों पर प्रकाश डालिए।

Urban Forest refers to growing of Forest patches in urban areas, to improve green cover in the city.

Urban Forest
- → Creation of Forest patch through Afforestation
- → Planting of trees in on waste land, along roadside, in garden/parks etc.
- → Maintenance through continuance monitoring by Municipal bodies, forest dept

Benefits

Ecological:

1. Reduces Air pollution, noise pollution
2. Ground water recharge
3. checks soil erosion
4. Counters Urban Heat island effect
5. Regulates Microclimate, provides fresh oxygen etc.

Don't write anything in margin (इस भाग में कुछ ना लिखें)

⑥ Help realise Paris Agreement target

Economic:

① Increase in property value

② livelihood to local population through provisioning of produce from trees

Social & cultural:

① Venue for local festival

② Psychological positive impact /stress reduction

Steps taken

① 'Nagar Van Scheme' to create 200 urban forests in next 5 years

② 'Green Highway policy 2015' for greening Highways passing through Urban areas

③ Social Forestry Divisions established in Forest departments by various state government

'Warje forest' of Pune is a good urban forest case study which could be replicated elsewhere.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

9. How has globalization impacted the location of the IT industry? (150 words) 10

वैश्वीकरण ने IT उद्योग की अवस्थिति को किस प्रकार प्रभावित किया है?

IT Industry refers to the Tertiary sector activity dealing with Hardware (computers, monitors, CPU etc) and Software creation / BPO services etc.

Impact of Globalisation in location of IT Industry

① Low value services like call centre, data entry, record keeping etc. shifted to developing countries where labour cost is low

Ex: shift from US, EU to Vietnam, China, India etc.

② Concentration of IT Industry in few pockets where there's availability of skilled labour, fast internet, 24×7 electricity etc.

Ex: Powai (Mumbai), NCR Region, Bengalore

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Silicon Valley in US etc.

③ Globalisation has resulted in intense competition among various nations in terms of giving sops / favourable policies, which affect the location

Ex: India post 1991 LPG Reforms came out with IT Act 2000, IT policy to attract IT Industry

④ Globalisation has paved way for flow of Education across borders through foreign University establishment, MOOCs etc thereby skilling people in other countries like China, Singapore, India etc. which has propelled IT Industry there

This way Globalisation has ~~resp~~ reshaped location of IT Industry in a profound way.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

10. How can eco-tourism be used to sustainably harness the potential of tourism industry in India? Discuss the challenges and steps taken by the government in this context. **(150 words) 10**

भारत में पर्यटन उद्योग की क्षमता का संधारणीय रूप से दोहन करने हेतु पारिस्थितिकीय पर्यटन का कैसे उपयोग किया जा सकता है? इससे जुड़ी चुनौतियों और इस संदर्भ में सरकार द्वारा उठाए गए कदमों की विवेचना कीजिए।

Eco tourism refers to tourism in ecological and environmentally important areas viz. coastal tourism, tourism in National Parks / sanctuaries etc.

How eco tourism can help harness tourism potential?

① Huge potential in India: India has ~8% of global biodiversity. Almost all major types of ecosystem present viz. mangrove, corals, deserts, wetlands etc thereby paving huge potential

② Scope of job creation, foreign exchange earning etc

③ Can pave way for sustainable conservation of ecosystem through incentive creation to local community.

Don't write anything in this margin (इस भाग में कुछ ना लिखें)

Challenges associated

① Lack of connectivity via rail, road etc.
Ex poor connectivity of Gir National Park

② Basic facilities like cleanliness, toilet facility, resting places etc missing in eco-tourism areas
Ex Marine National Park (Jamnagar) lacks even basic toilet facilities

③ Hotel, Resort etc unavailability

④ Proper skilled Guides lacking

Steps taken

① Eco tourism circuits are being created under Swadesh Darshan scheme

② States' initiatives Ex Gujarat government has given 'Industry status' to Eco-tourism,

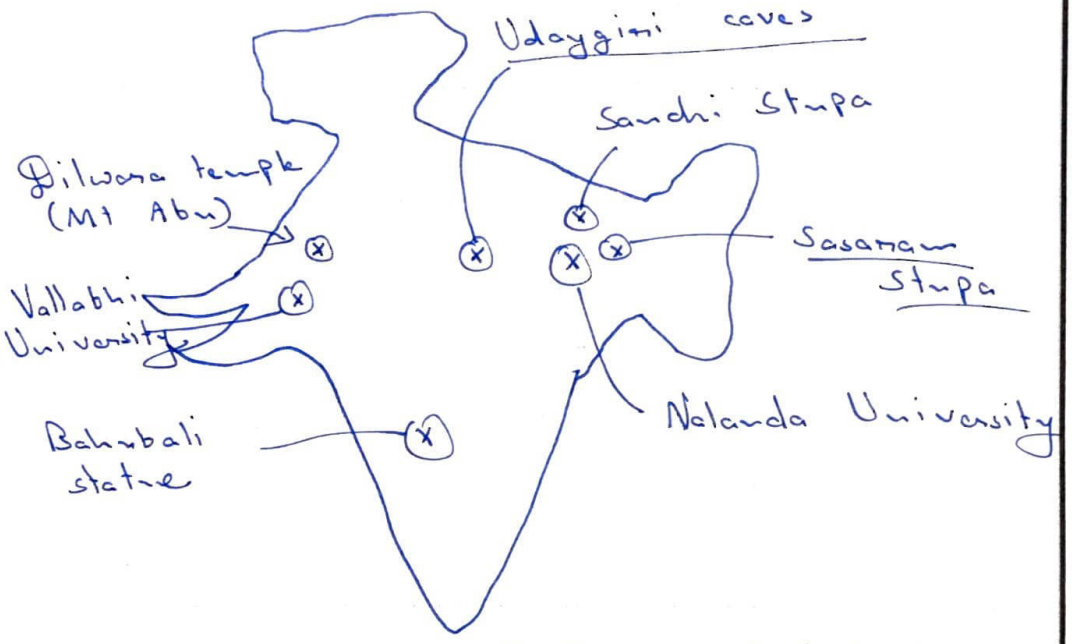
③ Promotion of Eco tourism by ICCR abroad under 'Incredible India Campaign'

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

11. The advent of Buddhism and Jainism was instrumental in the development of architecture in ancient India. Discuss. **(250 words) 15**

प्राचीन भारत में स्थापत्य कला के विकास में बौद्ध धर्म और जैन धर्म का उद्भव सहायक रहा। चर्चा कीजिए।

Buddhism and Jainism have richly contributed to development of Architecture of various types in India, which is in existence in an intact manner till date.



Jainism and Buddhism Architecture

Buddhist Architecture:

① Creation of Chaityas and Viharas across the country (envisaged to be

Don't write anything in margin (इस भाग में कुछ ना लिखें)

Prayer halls and resting place for Monks (sangh)

Ex Karla caves near Lonavala (Maharashtra) house many Chaityas and Viharas.

(2) Creation of Stupas on relics of Buddha/other monks

Ex Sanchi, Sasaram, Sonari Stupa established by Ashoka

Harshavardhana established many Stupas across Northern India

(3) Buddhist University established to preserve manuscripts / act as learning centres

Ex Nalanda University (Bihar) during Gupta period

Sree Parvatha University in Andhra Pradesh

(4) ~~Sant~~ Buddhist temples / rock cut architecture visible in Ajanta caves, Bagh cave (M.P.)

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Jain Architecture

① 'Basadis' i.e. Jain Centre of learning/temples established in many parts during Ancient India

Ex: Dilwara temple (Abu) by Bhima Solanki

② Cave Architecture as visible at Brahmagiri, Udaygiri

③ University establishment Ex Vallabhi University in Gujarat during Solanki dynasty

④ Sculptures created Ex Yaksha, Yakshinis, Bahubali sculpture @Sravanabellagola

This way, both the Religions have added to the richness and diversity of Indian Architecture

Don't write anything this margin (इस भाग में कुछ ना लिखें)

12. The reactionary policies of Lord Lytton and the liberal policies of his successor Lord Rippon acted as catalyst in the formation of the Indian National Congress. Discuss. **(250 words) 15**

लॉर्ड लिटन की प्रतिक्रियावादी नीतियों और उसके उत्तराधिकारी लॉर्ड रिपन की उदार नीतियों ने भारतीय राष्ट्रीय कांग्रेस के गठन में उत्प्रेरक का कार्य किया। चर्चा कीजिए।

Indian National Congress was established in 1885 to stem Nationalist struggle by Early Nationalists, partly due to the consequences of Actions of 2 diametrically opposite viceroys viz. Lord Lytton and Lord Ripon.

Reactionary policy of Lord Lytton (1876-80)

① Introduced Arms Act - discriminatory Act which mandated Indians to mandatorily carry Arms license which angered Indians.

② Held Delhi Darbar when nation was reeling under famine (Deccan famine of 1870s) led to sharp criticism of the move by Nationalist leaders.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

③ Reduced Age of Entry of Indians in Civil service to 19 years, which created backlash.

④ Vernacular Press Act introduced to curb autonomy of local press which further added to anger of Nationalists

Liberal policies of Lord Ripon (1880-84)

① Revoked Arms Act

② 1st Factory Act of 1881 legislated by Lord Ripon

③ Revoked Vernacular Press Act

④ Appointed Hunter Committee to improve Indian Education system

⑤ Appointed Commission to study the question of Age of Entry into Civil services

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(6) Brough Ilbert Bill to provide for Equality in trying of cases of Europeans by Indian judges

How these policies hastened INC formation?

Lord Lytton
- → Angered Nationalists, thus increased political activity
- → Realisation among Nationalists that they have to put forth their demand under one Organisation to secure Indian interest

Lord Ripon
- → Favourable policies laid favourable liberal atmosphere where political activity could thrive without any Repression

Thus, apart from several other factors, policies of the 2 viceroys also were instrumental in hastening INC formation.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

13. Gandhiji changed his methods of struggle against the British from time-to-time to suit the varied circumstances and problems that needed to be tackled. Analyse. **(250 words) 15**

गांधी जी ने विभिन्न परिस्थितियों और समस्याओं जिनसे निपटने की आवश्यकता थी, के अनुकूल समय-समय पर अंग्रेजों के विरूद्ध संघर्ष की अपनी विधियों में परिवर्तन किया। विश्लेषण कीजिए।

Gandhiji, the undisputed leader of Nationalist struggle, adopted flexible approach based on time and place to realise maximum gains.

Change in method of struggle

① Gandhiji was moderate in his method earlier during his African days, where he petitioned Britishers, seeking his demands. But he realised the futility of this approach and thus switched to Extremist methods of mass movement to pressurize Britishers.

② He turned pro-Britishers or anti-Britishers based on circumstance.

Ex Gandhiji supported Britishers on

moral ground during WW I and asked youths to support ~~H~~ Britishers. However, one was ended, he launched Non cooperative movement (NCM) turning anti British.

(3) Gandhiji took active step in Hindu-Muslim joint fight during NCM as Khilafat question was also involved concerning Muslims. However, he later changed his approach during Civil Disobedience movement (CDM) sensing communal atmosphere.

(4) Gandhiji pitched for absolute non-violence during NCM and CDM. However, it was partly relaxed in Quit India Movement as clear from his 'Do or Die' call, due to the circumstances involved (Japanese threat)

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(5) Gandhiji adopted Struggles separated by Truce period in between for energy recharge of masses. It showcases the wisdom of Gandhi in understanding inherent mass struggle limitation.

(6) Gandhiji stressed on Group based struggle during NCM and CDM. However due to WW2 and British preoccupation in fighting Nazi forces, he adopted 'Individual Satyagraha' approach in 1940.

It's clear from above analysis, that Gandhiji played the Rules on the basis of time, place and circumstances rather than relying on single approach throughout, which ultimately led to the rise and success of Gandhiji.

14. Bring out the relationship between the industrial revolution and the advent of imperialism in different parts of the world. (250 words) 15

औद्योगिक क्रांति और विश्व के विभिन्न भागों में साम्राज्यवाद के आरंभ के मध्य संबंधों को स्पष्ट कीजिए।

Industrial Revolution (IR) refers to the series of drastic changes which came in society, economy and polity due to machine based production system due to technological development. It's said to be the driving force behind Imperialism.

Relationship between IR and Imperialism advent

Industrial Revolution	How it led to Imperialism?
① Demand for Raw materials increased Ex cotton, jute, silk etc.	Led to increased colonisation to secure assured supply of raw materials from colony to keep production running smoothly

Don't write anything this margin (इस भाग में कुछ ना लिखें)

	Ex Britain colonised India to secure cotton
② IR resulted in excess production beyond domestic demand. This necessitated finding of new markets.	Spain colonised Latin American countries to sell its products. France colonised Canada to sell various products like garment, steel etc.
③ IR resulted in surplus capital/wealth creation in the hands of Industrialists. This demanded new scope of investment opportunity.	Colonies paved excellent investment opportunity, assuring high rate of return. Ex: Britain invested in Railways in its colonies giving huge returns.
④ IR gave thrust to Mercantilist policy.	Mercantilism focusses on maximum accumulation

Don't write anything in margin (इस भाग में कुछ ना लिखें)

of Gold and not positive foreign exchange. This was possible only through discriminatory policy adoption w.r.t. colonies which accelerated race for colonisation

Ex Scramble for Africa

Thus, IR is intricately linked to advent of Imperialism due to its inherent characteristics of profit maximisation, market maximisation and cost minimisation.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

15. The caste system in India has continued to persist by adapting itself to a variety of changing socio-economic and political conditions in the past few decades. Discuss. **(250 words) 15**

भारत में जाति व्यवस्था विगत कुछ दशकों में परिवर्तित होती विभिन्न सामाजिक-आर्थिक और राजनीतिक स्थितियों के अनुरूप अपने आपको ढालकर विद्यमान है। चर्चा कीजिए।

Caste system refers to the unique social institution in the Indian subcontinent, characterised by principle of purity and pollution, endogamy and strict rule based orders based on Birth.

How Caste system has continued to persist by adaptation?

Changing conditions	How Caste system persisted?
① Urbanisation: It was thought that caste system is the feature of rural area and would vanish with urbanisation.	Caste system is persistant as seen from ghettoisation i.e. same caste people residing in close proximity in urban areas Ex Patels in Vikhroli (Mumbai)

Don't write anything in margin (कुछ भाग में कुछ ना लिखें)

② Westernisation/Globalisation It was belived that with modern ideas of equality, justice, meritocracy – caste system would slowly go away	Global Caste based groups/ Associations have been formed instead. Ex: Global Patidar Association (Sardardham)
③ With Technological advancement, caste system was believed to weaken	Rather, it has strengthened Ex Group of Mecnas on Social media
④ Deepening of democracy, inclusive growth etc. were belived to ~~be~~ weaken caste system.	Rather, caste based political party (e.g. BSP), caste based mobilisation during elections have increased

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Reasons for persistance

① Ineffective laws to check caste based mobilisation during elections

② Caste identity is deeply rooted culturally which is difficult to be removed in short term.

③ ICT has facilitated organisation formation / unity, involving same caste people

④ Policies like Reservation reinforces caste identity.

Multi sectoral approach involving strong political will, reforms in Education system, empowerment of Election Commission etc is need of the hour to weaken caste based identity.

Don't write anything in margin (कुछ भाग में कुछ ना लिखें)

16. It is argued by some that regionalism is a threat to national integrity while others consider it as a highly impactful tool in facilitating political participation. Discuss. **(250 words) 15**

कुछ लोगों द्वारा यह तर्क दिया जाता है कि क्षेत्रवाद राष्ट्रीय अखंडता के लिए एक खतरा है, जबकि अन्य लोग इसे राजनीतिक सहभागिता को सुगम बनाने में एक अति प्रभावशाली साधन मानते हैं। चर्चा कीजिए।

Regionalism refers to the political ideology/ movement, whereby a person/community's loyalty towards one's Region becomes more than one's loyalty towards the Nation. Thereby, posing a threat to Unity and integrity of nation.

How Regionalism is threat to National integrity?

① Divides the Nation:

Ex partition of 1947 is an example of how Regionalism can destroy a nation

② Threat of secessionism rises

Ex Khalistani movement (1980s)
J & K insurgency

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(3) Generates ill-will among people/states

Ex Inter state Cauvery water dispute has resulted in animosity between Karnataka and Tamil nadu.

(4) Goes against spirit of constitution

Ex Son of soil movement against Art 19 – Freedom of movement/ Residence

(5) Leads to violence, security deterioration which may jeopardise national integrity

Ex North East Insurgency

How Regionalism Facilitates political participation?

(1) Regionalism has led to creation of New states, which has enhanced political participation at state level

Ex Telangana, Meghalaya, etc.

(2) Regionalism paves way for participation

Don't write anything in margin (इस भाग में कुछ ना लिखें)

in pressure group activities which enhances political participation

Ex People's participation in Gorkhaland Agitation

(3) Regionalism ~~has~~ paves way for political decentralisation

Ex Many areas in North East like Bodoland brought under 6th Schedule of Constitution

Thus, Regionalism is a two-way process. It enhances people's participation, but at the same time unjust and Unconstitutional demand/means may also ~~pose~~ threaten National integrity.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

17. Natural gas has become an important primary energy source and its consumption is projected to increase further. Identify various usages of natural gas and give a brief account of its distribution globally.

(250 words) 15

प्राकृतिक गैस एक महत्वपूर्ण प्राथमिक ऊर्जा स्रोत बन गया है तथा इसके उपभोग में आगे और वृद्धि होने का अनुमान है। प्राकृतिक गैस के विभिन्न उपयोगों की पहचान कीजिए और विश्व स्तर पर इसके वितरण का संक्षिप्त विवरण दीजिए।

Natural Gas is the Conventional Gas, predominantly Methane, Found in close proximity to oil field / coal block in general, is formed due to decomposition of trees / marine organisms owing to intense heat and pressure of Earth's interior.

Consumption in future ⇐ As per International Energy Agency likely to increase due to factors like

1. Climate change obligation
2. it's relatively more eco friendly
3. Technological development to better utilise Natural Gas in multiple Application

Uses of Natural Gas

1. Potential to replace petrol / diesel in Automobile via use of CNG cars / buses

Don't write anything in margin (इस भाग में कुछ ना लिखें)

② Electricity generation through Gas based power plant working on ~~Rank~~ Brayton cycle

③ Heating purpose in domestic sphere (in cold areas) for Space Heating

④ Industrial Use: Making of Urea, other Fertilisers, Haber's process, chemical industries etc.

⑤ Cooking through LPG (variant of Natural Gas)

Global Distribution

① Highly uneven distribution globally

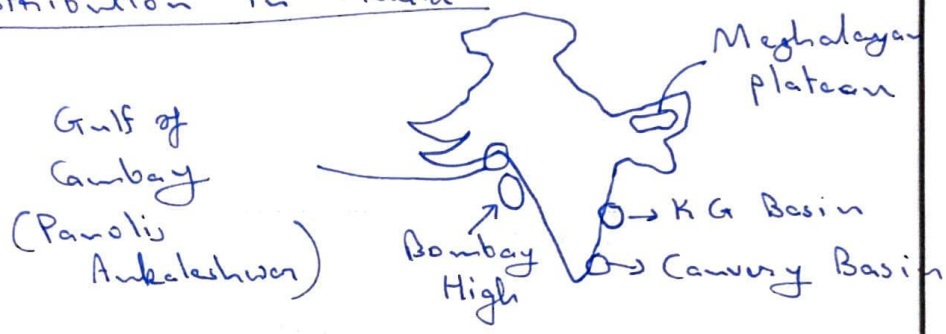
② Majorly concentrated in few countries) Regions like

Top countries having high Natural Gas Reserves = Qatar, Saudi Arabia, UAE, Russia, Turkmenistan, Canada, USA, China

Don't write anything this margin (इस भाग में कुछ ना लिखें)

③ Important gas fields globally = Zakum (UAE)
Galkynish gas field (Turkmenistan)
Farzad B gas field (Iran)

④ Distribution in India



NITI Ayog has rightly envisioned switch to 'Gas based Economy' due to multiple advantages like Energy security, less emission, cheap source of Energy etc. Steps in this direction globally is need of the hour.

Don't write anything in margin (इस भाग में कुछ ना लिखें)

18. Describe the process of rift valley formation, with special emphasis on the Great Rift Valley System. **(250 words) 15**

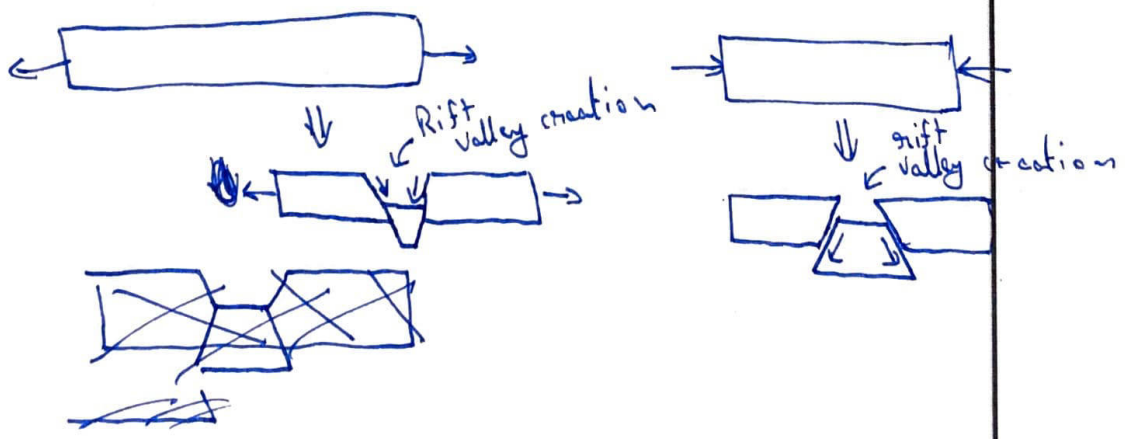
महान भ्रंश घाटी प्रणाली पर विशेष बल देते हुए, भ्रंश घाटी के निर्माण की प्रक्रिया का वर्णन कीजिए।

Rift valley refers to the geological feature, characterised by huge fault in continental crust, which ultimately results into formation of nascent sea/ocean/river flow.

Rift Valley formation processes

① Method 1: Due to faulting

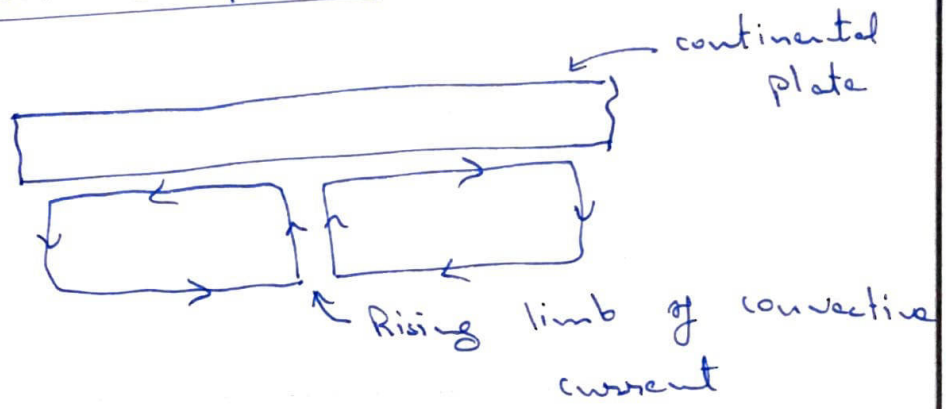
- Faulting due to Tensile stress
- Faulting due to compressive stress



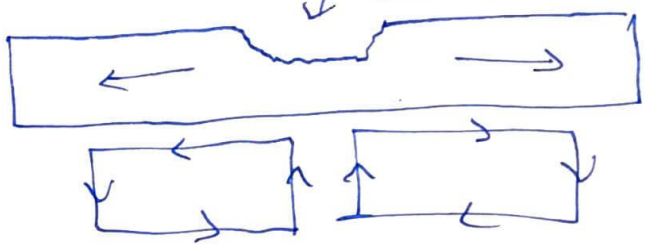
Don't write anything this margin (इस भाग में कुछ ना लिखें)

Ex Narmada, Mahanadi, Godavari flow through Rift valleys created due to faulting created by Endogenic forces

② Tectonic process:



⇓ Rift valley creation due to break up of continental crust



Ex East African Rift valley is the result of this process.

Mechanism: Rising limb of convective

Don't write anything in this margin (इस भाग में कुछ ना लिखें)

Current in Mantle and associated shear stress imposed on continental plate results in break up of the plate which results in Rift valley creation.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

19. India's water resources have witnessed rapid depletion due to a mix of economic, geographic, and political factors. Explain and discuss its implications. **(250 words) 15**

भारत के जल संसाधनों में विभिन्न आर्थिक, भौगोलिक और राजनीतिक कारकों के संयोजन के कारण तेजी से ह्रास देखा गया है। स्पष्ट कीजिए एवं इसके निहितार्थों की विवेचना कीजिए।

As per NITI Ayog's 'Composite water management Index', India is facing the 'worst water crisis' in entire history.

Reasons for rapid depletion

Economic:

① Faulty MSP policy which favours water guzzling crops like wheat/rice

② Free power via subsidy to farmers by state governments leading to unchecked groundwater extraction

③ No water pricing resulting in misuse of water by ~~Agri~~ farmers, Industry, households

Don't write anything in margin (इस भाग में कुछ ना लिखें)

Geographical factors

① Monsoon type climate :

~75% rainfall in only 4 months

Regional variation : North East receives disproportionate rain leading to wastage of water via run off

② Climate change leading to uncertain spatial and temporal rainfall variation

③ ~~La nin~~ El Nino weakens monsoon

Political factors

① Water in 'state list' ⇒ No cohesive Nationwide management possible

② Inter state disputes leading to non utilisation of water properly

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Implications

① Political: → Rising inter state water dispute due to shortage

→ International conflict

Ex India - Bangladesh over Teesta

② Economic: → shortage of water for Industries

→ cattle death leading to distress to farmers

→ lower agri. yield threatening food security

③ Social: → forced migration

→ Increased burden on women to fetch water by walking longer distance

→ Rise in malnutrition

Don't write anything in margin (इस भाग में कुछ ना लिखें)

20. How are plateaus formed? Also, briefly discuss the features of the Deccan plateau and its economic significance. **(250 words) 15**

पठार का निर्माण कैसे होता है? साथ ही, दक्कन के पठार की विशेषताओं और इसके आर्थिक महत्व की संक्षेप में विवेचना कीजिए।

Plateau formation

① Method 1: Glacial Erosion

Ex Laurentian plateau (Canada)

② Method 2: Wind deposition

Ex Loess plateau (China)

③ Tectonic reason: Epeirogenic process

Ex Katanga plateau (Africa)

④ Erosion of Mountains:

Ex Table Land plateau in Mahabaleshwar

Basaltic

⑤ Lava deposition

Ex: Deccan Trap, Colorado plateau (USA)

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

Features of Decon Plateau

1. Step like structure
2. Formed due to lava deposition from Reunion hotspot
3. Covers large Geographical area (Gujarat, M.P., Maharashtra, Karnataka)

Economic Significance

1. Rich black soil ⇒ cotton, groundnut tobacco cultivation
2. Rich in Minerals
   Ex Iron ore found in Ratnagiri
   copper, chromium etc found on Dharwad plateau
3. Hydropower generation due to water falls

VISION IAS

www.visionias.in

GENERAL STUDIES (TEST CODE : 1524)

Name of Candidate	Kartik Jivani		
Medium Eng./Hindi	English	Registration Number	13245
Center	Online	Date	25/12/20

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	10	
2	10	
3	10	
4	10	
5	10	
6	10	
7	10	
8	10	
9	10	
10	10	
11	15	
12	15	
13	15	
14	15	
15	15	
16	15	
17	15	
18	15	
19	15	
20	15	

Total Marks Obtained:

Remarks:

INSTRUCTIONS

1. Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
   उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न–पत्र कोड, विद्यार्थी क्रमांक आदि)।
2. There are **TWENTY** questions printed in **ENGLISH & HINDI**
   इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
3. **All questions are compulsory.**
   सभी प्रश्न अनिवार्य हैं।
4. The number of marks carried by a question/part is indicated against it.
   प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
5. Answers must be written in the medium authorized in the Admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in medium other that the authorized one.
   प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न–सह–उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
6. Word limit in questions, if specified, should be adhered to.
   प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
7. Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.
   उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

EVALUATION INDICATORS

1. Contextual Competence
2. Content Competence
3. Language Competence
4. Introduction Competence
5. Structure - Presentation Competence
6. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

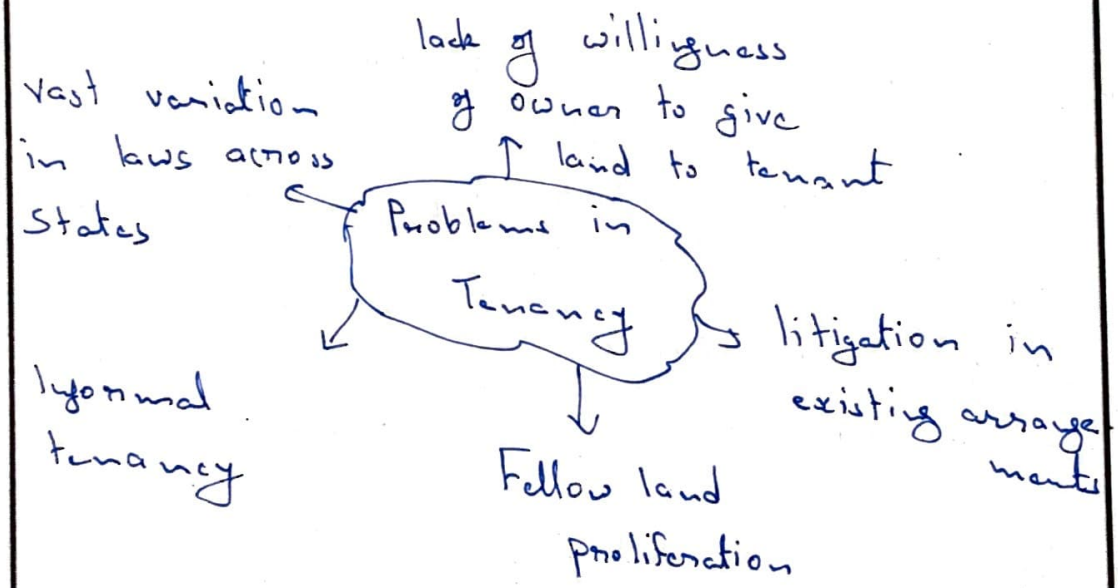
All the Best

Don't write anything this margin (इस भाग में कुछ ना लिखें)

1. Tenancy reforms are much needed to give a boost to the Indian agricultural sector. Comment. In this context, also discuss the significance of the Model Land Leasing Act, 2016. **(150 words) 10**

भारतीय कृषि क्षेत्रक को बढ़ावा देने के लिए काश्तकारी सुधारों की अत्यंत आवश्यकता है। टिप्पणी कीजिए। इस संदर्भ में, मॉडल भूमि पट्टा अधिनियम, 2016 के महत्व की भी विवेचना कीजिए।

Tenancy reforms refers to Reforms in the relationship between owner of agricultural land and tenants



How tenancy reforms will boost Agriculture?

① Will increase Area under cultivation by reducing fallow land

② Tenants would be able to avail

Don't write anything in this margin (इस भाग में कुछ ना लिखें)

benefits of government schemes/programs if they have formal agreement

(3) Social / Economic Justice by giving land to the landless

(4) Security of tenure to the tenant will lead to higher motivation and high productivity in farming

Model Land Leasing Act 2016 – Significance

↳ Prepared by Haq Committee (NITI Aayog)

(1) Provides for formal Agreement, thereby will help reduce Informality

(2) Balances the interest of both owners as well as tenants through dispute redressal system, various clauses etc.

Need today is for Centre to encourage states to adopt Model Act to realise 'Doubling Farmers' Income'

Don't write anything this margin (इस भाग में कुछ ना लिखें)

2. Identify the various challenges that have restricted the entry of Indian MSMEs into the foreign market. Also mention some government initiatives that have been taken to facilitate MSME exports. **(150 words) 10**

विदेशी बाजारों में भारतीय MSMEs के प्रवेश को बाधित करने वाली विभिन्न चुनौतियों की पहचान कीजिए। साथ ही, MSME के निर्यात को सुगम बनाने के लिए सरकार द्वारा की गई कुछ पहलों का भी उल्लेख कीजिए।

Share of Exports by MSMEs account for meagre ~40%, despite they constituting bulk of entreprises/ companies in India.

Challenges by MSMEs to tap foreign market

① Lack of Economies of scale, thereby lower competitiveness

② lack of skilled human resources with MSMEs. Mostly they employ unskilled/ semi-skilled

③ Lack of awareness about export markets / demand in various jurisdictions

④ Weak credit availability for exports due to unorganised/ informal nature

Do not write anything in margin (इस भाग में कुछ ना लिखें)

(5) High Logistic costs in India (14% of GDP) reduces competitiveness in global market

(6) Lack of quality standard maintenance/ No brand building etc

Government Initiatives to boost MSME Exports

(1) Niryat scheme/portal to facilitate export by capacity building

(2) Zero Effect, Zero Defect scheme for quality improvement of MSME products

(3) RoDTEP scheme to provide fiscal incentive for MSME Exports

(4) 'Rs 1 cr loan in 59 minutes' initiative for providing credit to MSME

More handholding support is need of the hour to realise 'Inclusive Growth' and increase Exports.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

3. India's march towards inclusive growth and it achieving the Sustainable Development Goals are intricately linked. Discuss. (150 words) 10
समावेशी विकास की दिशा में भारत की प्रगति और संधारणीय विकास लक्ष्यों की प्राप्ति जटिल रूप से जुड़े हुए हैं। चर्चा कीजिए।

'Inclusive Growth' refers to the growth process whereby every section contributes as well as benefits equitably out of growth process.

Inclusive Growth Strategy of India	How it helps realise SDG (17 Goals and 169 targets)
① Agricultural development through initiatives like PMKSY, PM KISAN, PMFBY etc.	⇒ helps realise SDG 1 (poverty reduction) as major poverty concentrated among farmers ⇒ Helps realise SDG 2 (Hunger elimination) by increasing Agriculture production

Don't write anything in margin (इस भाग में कुछ ना लिखें)

(2) Women empowerment through initiatives like Nirbhaya Fund, Maternity Benefit Act etc.	Helps realise SDG 5 (Gender Equality)
(3) Job creation through initiatives like Stand Up India, PM Mudra Yojna etc.	helps realise SDG 8 (Economic growth and decent employment for All)
(4) Promotion of Rural infrastructure development through PURA, PM Gram Sadak Yojna	helps realise SDG 9 (Industry, Infrastructure and innovation)
(5) Capacity building of humans via New Education Policy 2020, Ayushman Bharat	SDG 3 (Health & well being for All) SDG 4 (lifelong learning opportunity)

Need of the hour is to sustain this momentum to realise 'Sabka Saath, Sabka Vikas'

Don't write anything this margin (इस भाग में कुछ ना लिखें)

4. Highlight the need for evolving an appropriate system of Rules Of Origin in regional trading arrangements. What steps have been taken by India recently in this regard? (150 words) 10
क्षेत्रीय व्यापार व्यवस्थाओं में उत्पत्ति के नियमों की एक उपयुक्त प्रणाली विकसित करने की आवश्यकता पर प्रकाश डालिए। हाल ही में, भारत द्वारा इस संबंध में क्या कदम उठाए गए हैं?

Rules of Origin refers to comprehensive Rules delineating how to determining country of Origin of goods/service, based on minimum value addition percentage in a given country.

Why Rules of Origin (RoO) needed in Regional trading arrangements?

① To check dumping by a particular country

② To ensure Fairness in trading arrangement

③ Without RoO, third country may exploit duty free access

Ex China may sell its products to India by packaging it in Bangladesh

Don't write anything in this margin (इस भाग में कुछ ना लिखें)

and thereby benefiting under SAFTA for duty free access

④ May threaten domestic industries/ farmers if RoO ~~ma~~ framework is weak

Steps taken by India in this regard

① India refused to sign RCEP as RoO framework was weak in nature

② Ministry of Commerce and Industry has come out with detailed Rules to determine RoO containing provisions like

↳ Minimum value addition requirement in a particular country

↳ framework of Anti-dumping duty if provisions not adhered to

India must insist on robust RoO framework in future negotiations to protect domestic industries

Don't write anything this margin (इस भाग में कुछ ना लिखें)

5. MSP regime is a creation of an era of scarcity in the 1960s. Discuss its relevance in the current era of surplus agricultural production.

(150 words) 10

MSP व्यवस्था 1960 के दशक के अभावग्रस्तता के युग का एक आविष्कार है। अधिशेष कृषि उत्पादन के वर्तमान समय में इसकी प्रासंगिकता की विवेचना कीजिए।

Minimum Support Price refers to the price announced for 23 crops by Cabinet committee on economic affairs before each season (Kharif, Rabi) to support farmers via floor price

Creation of Era of Scarcity in 1960s

- Food crisis / famine propelled immediate requirement to boost agriculture production
- To modernise agriculture by incentivising farmers to use modern inputs
- To support public distribution program (PDS) to ensure food security and reduce foreign dependence like PL-480 program

Don't write anything in this margin (इस भाग में कुछ ना लिखें)

Relevance of MSP Regime today

① Majority farmers (86%) small and marginal, thereby requires government support for sustainance

② Required to run PDS program to realise commitment under NFSA, 2013

③ Required to maintain Buffer stock and thereby control price volatility in market

Issues/problems in MSP

- against crop diversification as only promotes wheat/rice
- only benefitting ~6% farmers (Shanta Kumar committee)
- ecological concerns - water depletion, soil hardening etc.

Way Forward

- Promote effective procurement for other crops as well
- Reforms in FCI, PDS based on Abhijeet Sen committee suggestio

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

6. Examine the link between the recent locust attack and climate change. (150 words) 10

हाल ही में हुए टिड्डियों के हमले और जलवायु परिवर्तन के मध्य संबंध का परीक्षण कीजिए।

India, along with other South Asian / Middle East countries witnessed one of the worst locust attacks in 2020, primarily owing to Climate Change.

Link of Locust Attack with Climate Change

① Climate change has increased frequency and intensity of Cyclones in Indian Ocean.

Cyclone in Oman / Yemen
⇓
led to moist soil / land creation
⇓
favourable environment for locust breeding

② Climate change has increased

Don't write anything in margin (इस भाग में कुछ ना लिखें)

frequency of Indian Ocean Dipole, (IOD)

IOD = periodic reversal of temperature/pressure between Western and Eastern Indian Ocean

⇓

Warm Western Indian Ocean more suitable for Tropical Cyclone

⇓

More Locust breeding

(3) Climate change has altered Wind pattern globally. ~~Hi~~ strong Wind from East to West i.e. West Asian Region to India, brought Locust swarm in India.

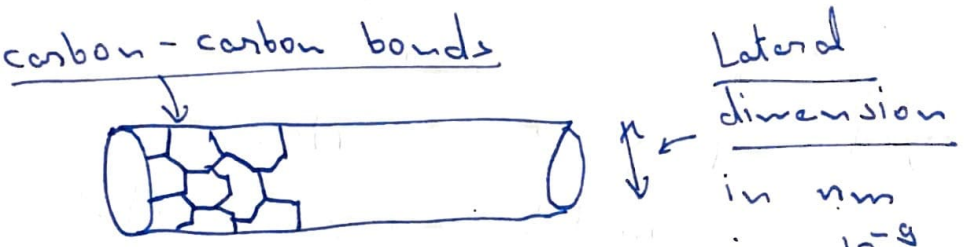
Link between Climate change and Locust Attack is well established. Need is for global cooperation under FAO to address future attacks.

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

7. Highlighting the properties of Carbon Nanotubes, discuss its applications. **(150 words) 10**

कार्बन नैनोट्यूब्स के गुणधर्मों पर प्रकाश डालते हुए, इसके अनुप्रयोगों की विवेचना कीजिए।

Carbon Nanotube is 3-D nanomaterial in the shape of tube, having distinctive properties, thereby finding wide applications across various sectors.



Carbon Nanotube structure

Properties

1. High strength to Weight ratio
2. High termal conductivity
3. High ductility / toughness
4. Good Optical properties like translucense
5. Favourable Electrical properties like

Don't write anything in this margin (इस भाग में कुछ ना लिखें)

non conductivity, high resistance to current flow

(6) Non magnetic in nature

Applications

(1) Medical Application: small size enables Targeted drug delivery and thereby reduces collateral damage to other tissues

(2) Water purification - Nano filters created using nanotube

(3) Nano sensors for detection of small temperature change

(4) PV modules can be created having dust repellence, high efficiency etc.

(5) Nano composite material finding application in Aerospace/automobile/sports goods etc.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

8. India's domestic patent regime privileges public health over pharmaceutical industry's interests. Comment. (150 words) 10
भारत की घरेलू पेटेंट व्यवस्था औषध उद्योग के हितों पर सार्वजनिक स्वास्थ्य को विशेषाधिकार प्रदान करती है। टिप्पणी कीजिए।

Indian patent regime constitutes Patent Act, 1970, Patent Rules as well as National IPR policy 2016.

How patent regime privileges public health?

① Prevents Evergreening of patent as witnessed during Novartis Glivec case 2013

② Contains clauses for Compulsory Licensing i.e. government can issue license to manufacture drug to non patent holder to tide over unavailability/unaffordability of drug

Ex Compulsory license granted to NATCO to manufacture cancer drug in past

Don't write anything in this margin (इस भाग में कुछ ना लिखें)

(3) National IPR policy 2016 categorically reaffirmed India's stance of prioritising public health, much to the opposition of Western nations like US, EU etc.

(4) Indian patent law doesn't contain data exclusivity principles, long period of patent protection (like 25 years in USA) etc. It reflects India's commitment of public health over pharma industry's interests.

Reasons for it
- High poverty in India requires government support to ensure Health for All
- One of the Highest Disease Burden globally (Lancet Report)

Prioritising public health is a welcome step. But also heading to pharma industry's interest in a fair manner is required to boost new drug

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

9. Bring out the arguments surrounding the idea of employing the principle of 'one border - one force' on Indian borders. **(150 words) 10**

भारतीय सीमाओं पर 'एक सीमा-एक बल' के सिद्धांत का उपयोग करने के विचार के चतुर्दिक व्याप्त तर्कों को स्पष्ट कीजिए।

~~Kargil Rev~~

'One Border, One force' refers to the principle of deploying only one Force on a given border with a particular nation.

One Border One Force principle
- → One Border to be manned exclusively by one force only
- → One Force not to be diverted to any other duties except for guarding a particular border

Arguments for it

① Recommended by Kargil Review committee, GoMs reviewing KRC report, Madhukar Gupta committee etc.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

② Better Accountability could be realised as multiple forces in a particular borders leads to blame game

③ Better efficiency in border management. Thereby enabling to check smuggling, arms trafficking, drug trafficking etc.

④ Multiple forces lead to non-coordination and thereby ineffective management

Ex India-China border manned by Army (J&K), ITBP, Assam Rifle (North east)

⑤ Diversion of Force to other duties lead to ineffectiveness

Ex ITBP, BSF diverted for Election duty

Need is to implement this principle in letter and spirit for better border management and thereby check internal security issues

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

10. Assess the need to create a new cadre of Indian Frontier Administrative Service to undertake the vital tasks at Indian frontiers. **(150 words) 10**
भारतीय सीमांतों पर महत्वपूर्ण कार्यों को संपादित करने के लिए भारतीय सीमांत प्रशासनिक सेवा का एक नया संवर्ग बनाने की आवश्यकता का मूल्यांकन कीजिए।

Indian Frontier Administrative Service (IFAS) is the proposed reform by several strategic experts as a dedicated Central Service to guard Indian borders.

Problems/Issues at Indian Frontiers today

- Ineffective borders management
- Multiples Forces under different Ministries leading to non-coordination
- shortage of officers in BSF/ITBP etc.
- proliferation of infiltration (∵ Uni attach), smuggling, trafficking etc.
- clash between IPS vs CAPF leading to inefficiency

How IFAS can be helpful?

① Frontier management is a specialised task requiring thorough knowledge

of borders, expertise, requisite skills etc. IFAS can help in this regard.

② IFAS can possibly head all border force posts, thereby checking IPS v/s CAPF clashes

③ Uniformity in border management could be ensured as opposed to present day ad-hocism in each border

Challenges / counter Arguments

① May just add to already existing too many services, thereby against 'Minimum government, Maximum governance' motto

② Resistance from IPS as well as CAPFs like ITBP, SSM etc.

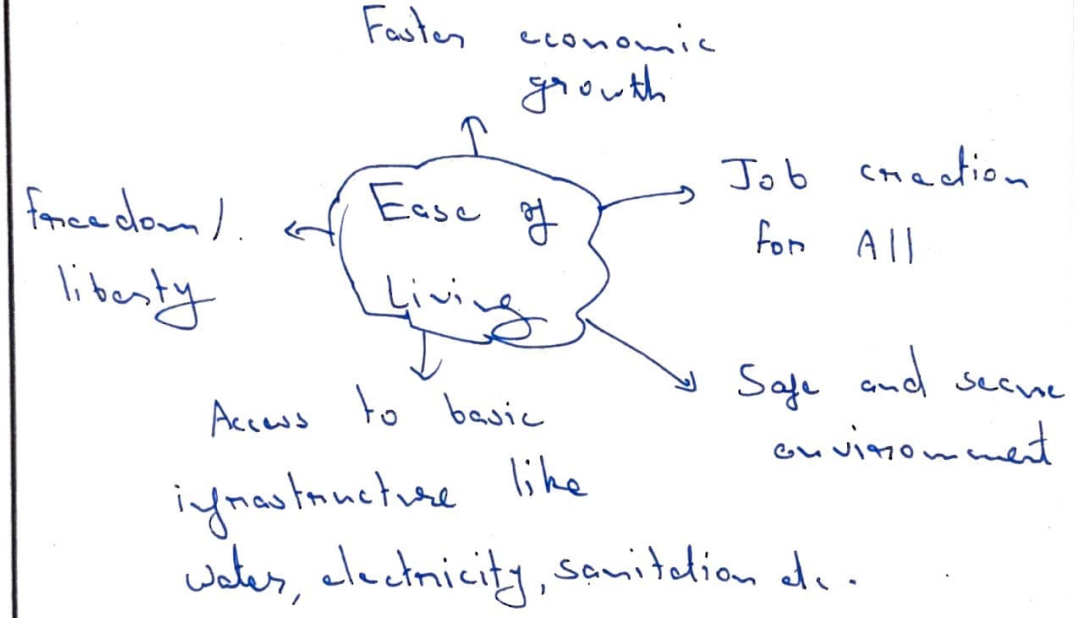
Idea of dedicated IFAS is a welcome step to ensure better frontier management. Debate in this regard should be initiated

Don't write anything this margin (इस भाग में कुछ ना लिखें)

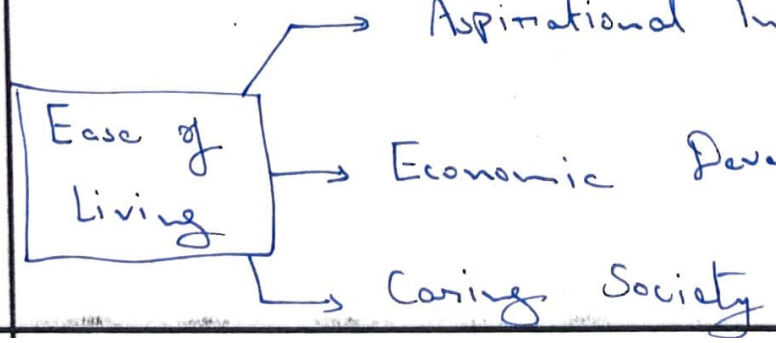
11. The main objective of Union Budget 2020-21 is to provide "Ease of Living" to all citizens. Analyse the framework proposed in the Budget 2020-21 to achieve this objective. **(250 words) 15**

केंद्रीय बजट 2020-21 का मुख्य उद्देश्य सभी नागरिकों को "ईज़ ऑफ़ लिविंग" (जीवन सुगमता) प्रदान करना है। इस उद्देश्य को प्राप्त करने के लिए बजट 2020-21 में प्रस्तावित ढांचे का विश्लेषण कीजिए।

Union Budget 2020-21 focussed on a central theme of ensuring 'Ease of Living' (EoL) for all citizens.



Budget Framework to realise EoL



① Aspirational India

↳ Purpose: To cater to aspirations of various sections of Indian society.

Agriculture / Farmer:

↳ 'Agri rail' and 'Agri flight' announced to provide cold storage and transport

↳ e-NAM and GraMs to cover more APMC Mandis to realise Doubling Farmers income

Women:

↳ 'One stop Sakhi Centres' to be expanded to ~~provide~~ meet all needs of women in one place.

② Economic Development

Start Up promotion:

Don't write anything this margin (इस भाग में कुछ ना लिखें)

↳ Definition of startups changed to benefit more number of startups

Corporate Tax Reduction

↳ To promote 'EoDS' and ultimately 'EoL' due to higher infrastructure creation, jobs etc.

Infrastructure:

↳ National Infrastructure Pipeline of 111 lakh cr announced to realise EoL

③ Caring Society

↳ PM Maan dhan yojna expanded to small vendors, unorganised sectors etc

↳ Kisan Credit Card expanded to cover allied activities like fisheries

↳ Education initiatives like distance learning degree by top education institutes

Budget 2020 has laid the foundation for EoL. Strong political will is needed to implement it through firm actions.

Don't write anything in this margin (इस भाग में कुछ ना लिखें)

12. Several challenges are needed to be addressed to realise the full benefits of the recent agricultural marketing reforms. Discuss. **(250 words) 15**
हालिया कृषि विपणन सुधारों के पूर्ण लाभों को साकार करने के लिए अनेक चुनौतियों का समाधान करने की आवश्यकता है। चर्चा कीजिए।

Government has undertaken Agricultural marketing reforms through 3 laws viz. Farmers Produce and Marketing Act 2020, Farmers Assurance of price and contract Act 2020, Amendment to Essential commidities Act 1955.

Potential Benefits of the Reforms

(1) Farmer Empowerment - they will be able to sell anywhere as per their choice to realise best returns

(2) Contract Farming would enable crop diversification, assured market and price for farmers, higher agricultural productivity due to technological input etc.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(3) Changes in Essential commodities Act would spur agricultural exports, higher investment in Food processing Industries etc. thereby leading to higher income to farmers, better yield etc.

Challenges which need to be addressed

(1) Perception management to assure farmers through dialogue, awareness as to how these Acts will benefit them in the long run

(2) strong political will to implement it in letter and spirit

Ex Recent onion export ban sends wrong signal to private exporters / FPIs

(3) lack of infrastructure in post harvest

Don't write anything in margin (इस भाग में कुछ ना लिखें)

stage i.e. rural roads, quality testing infrastructure, storage infrastructure etc. may hinder potential benefits realisation

(4) Indian farming dominated by small and marginal farmers (86%). Thus, contract farming may be difficult (due to dealing with multiple farmers)

Way Forward

(1) Promote FPOs (Farmer producer orgn) to realise contract farming to the fullest

(2) Expeditious rollout of e-NAM to truly empower farmers

(3) Promote Marketing Infrastructure investment by higher budgetary allocation, encouraging private sectors via fiscal incentives

All these will be a step forward in realising 'Doubling farmers income'

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

13. Multimodal transport requires multiple integrations across different modes of transportation. Substantiate. What are the challenges and opportunities associated with multimodal transportation for India? **(250 words) 15**

बहुविध परिवहन (मल्टीमॉडल ट्रांसपोर्ट) के लिए परिवहन के विभिन्न साधनों के मध्य विविध रूप से एकीकरण की आवश्यकता है। पुष्टि कीजिए। भारत के लिए बहुविध परिवहन से जुड़ी चुनौतियां और अवसर क्या हैं?

Multimodal transport ~~deals~~ refers to transportation of people / goods by connecting and integrating variety of modes viz rail, road, air, port, inland water navigation etc.

Multimodal transport - Multiple Integrations

① Requires connectivity in a seamless fashion

Ex goods transported via railway has to be connected to end-destination through good quality road connectivity from station to end point

② Requires freight rationalisation across different modes

Don't write anything in margin (इस भाग में कुछ ना लिखें)

Ex High Air cargo charges prevent robust rail-road-air multimodal transport

③ Requires co-ordination in timing

Ex If train frequency is very less, cargo would be stockpiled in station only leading to delay.

Challenges in Multimodal transport

① Different Ministries / Departments overseeing different modes

Ministry of Railway → Rail

Civil Aviation Ministry → Air

Shipping Ministry → Port

② lack of connectivity among various modes

Ex Poor evacuation road / rail infrastructure from ports

③ Competition rather than cooperation among different modes

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Ex Railway reforms like Tejas express to get back air passengers to Railways

(4) ~~be~~ Too many Regulators for different modes leading to inconsistency

Opportunities

(1) Robust Infrastructure across various modes may bode well for integration

(2) strong political will towards this direction. Ex Road Ministry and shipping Ministry headed by same Minister

(3) Could be transformational to reduce logistic cost, boost exports, promote Make in India etc

British / UK's model of merger of all transport related Ministries along with coherent policy/ Regulation is need of the hour.

Don't write anything in margin (कुछ भाग में कुछ ना लिखें)

14. Though COVID-19 pandemic exposes the vulnerability of Informal sector and associated labor force in India, it also presents an opportunity to rebalance formal-informal economy dynamics in the country. Discuss.

(250 words) 15

हालांकि, कोविड-19 महामारी भारत में अनौपचारिक क्षेत्रक और संबद्ध श्रम बल की सुभेद्यता को उजागर करती है, लेकिन साथ ही यह देश में औपचारिक-अनौपचारिक अर्थव्यवस्था की गतिशीलता को संतुलित करने का एक अवसर भी प्रस्तुत करती है। चर्चा कीजिए।

COVID 19 exposed informal nature of Indian economy and associated woes as reflected from high job losses, lack of social security, mass exodus of migrants etc.

Vulnerability of Informal sector and its labour force

① ~90% of Indian economy is informal as per Economic Survey.

Vulnerability
- → inability to resist shocks like COVID 19
- → poor economies of scale
- → lack of competitiveness globally | locally
- → poor credit availability

Don't write anything this margin (इस भाग में कुछ ना लिखें)

② Vulnerability of informal labour force

↳ lack of social security like pension, health insurance etc.

↳ lack of job security

↳ ~~poor~~ lack of opportunity for skill expansion.

↳ exploitation through long working hours, no minimum wage, unsafe working environment etc.

How COVID19 provides opportunity to formalise economy?

① Opportunity for Data Creation to comprehensively understand Indian economy especially since migrant workers have moved to their hometown

② Bring about Structural reforms in labour laws, companies Act etc. as it's

likely to face less resistance owing to COVID19 from both companies/ private sectors as well as labours

Suggestions / Way Forward

1. Promote Social Security benefits for all esp. marginalised like gig workers, street vendor, domestic workers etc

2. Change MSME related laws to formalise it and make them big as opposed to 'dwarf' nature today

3. sector-specific government intervention to formalise economy as was done recently for Food processing Industry through 'PM formalisation of micro FPI scheme'

Formal economy is crucial for economic growth, inclusive growth and thus must be pursued.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

15. Highlight the drivers and challenges facing India's ambition to become a gas-based economy. Mention the steps that have been taken by the government recently in this regard. **(250 words) 15**

गैस आधारित अर्थव्यवस्था बनने की भारत की महत्वाकांक्षा के चालकों और सामना की जाने वाली चुनौतियों को रेखांकित कीजिए। इस संबंध में हाल ही में सरकार द्वारा उठाए गए कदमों का उल्लेख कीजिए।

Gas based economy refers to an economy powered by Gas i.e. increasing share of Gas in primary Energy Mix by increasing its application in transport, power generation, cooking, Industry etc.

Drivers of gas based economy

① Increasing demand for gas from consumers due to initiatives like PM Ujjwala yojna

② strong political will to pursue gas based economy as reflected from various steps, policies, targets etc.

Ex Target of gas's share of 15% by 2030 in India's primary Energy basket.

Don't write anything in margin (इस भाग में कुछ ना लिखें)

(3) New areas having potential gas identified Ex K-G basin

(4) Government's push towards clean and sustainable development bodes well towards growth of gas based economy.

Challenges

(1) Lack of private sector interest due to policy unpredictability

(2) cheaper alternative like coal prevents wide spread use of gas for power generation

(3) Administered pricing Mechanism in gas (based on Rangrajan formula) dissuades private investment

(4) Gas pipe Infrastructure is insufficient in India.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Steps taken

1. City Gas Distribution Network scheme expanded to ~400 districts

2. 50 LNG fuel stations unveiled recently on National Highways

3. HELP policy and Open Acreage policy to boost private investment

4. PM Ujjwala yojna covered ~8 cr households

5. Pricing reforms suggested by PNGRB to provide for Uniform tariff structure

NITI Aayog has proposed comprehensive reforms like policy, regulatory changes etc. which need to be implemented to realise ~~the~~ SDG 7 (Clean Energy for All)

Don't write anything in this margin (इस भाग में कुछ ना लिखें)

16. Climate Change and the associated events endanger the marine and coastal ecosystems while increasing the vulnerability of coastal population. Examine. **(250 words) 15**

जलवायु परिवर्तन और संबद्ध घटनाएं तटीय जनसंख्या की सुभेद्यता को बढ़ाते हुए समुद्री एवं तटीय पारिस्थितिक तंत्रों को खतरे में डालती हैं। परीक्षण कीजिए।

As per 5th Assessment Report of IPCC, Climate change is likely to have catastrophic consequences for coastal population across the world.

Climate change and associated events
- → Rising Sea level
- → Increasing frequency and intensity of cyclones, storm surges etc.
- → Ocean Acidification
- → Marine Heat waves

Danger to Marine Ecosystem due to Climate Change

① Decrease in Marine productivity due to decrease in biomass

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(2) Coral bleaching due to rise in temperature

(3) Loss of marine biodiversity and killing of marine animals due to Ocean Acidification, temperature rise etc.

(4). Affects Ocean current, thermohaline circulation etc. due to differential thermal stratification, loss of ice and change in surface salinity etc.

Danger to coastal Ecosystem due to Climate Change

(1) Seas grass loss due to increase in cyclone / storm surges

(2) coastal erosion due to increased wave intensity

(3) Loss of fisheries

Don't write anything in margin (इस भाग में कुछ ना लिखें)

Increase in coastal population vulnerability

① Forced migration due to increase in coastal flooding, cyclone etc.

② salt water intrusion leading to fresh water salination, soil salinity etc. thereby posing water stress

③ Forced displacement due to rise in sea level

④ Agricultural yield loss posing threat for food security

Need is to have comprehensive study on ecosystem and population owing to Climate change and take suitable Adaption measures to mitigate the adverse impacts.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

17. Using examples, highlight how natural ecosystems perform different hazard mitigation functions. **(250 words) 15**

उदाहरणों का उपयोग करते हुए, रेखांकित कीजिए कि प्राकृतिक पारिस्थितिक तंत्र किस प्रकार अलग-अलग संकट के शमन का कार्य करते हैं।

Natural Ecosystem refers to variety of ecosystems including forest, mangroves, wetlands etc. which have huge potential for hazard Mitigation.

Natural Ecosystem	Hazard Mitigation functions
① Forests	→ Reduces runoff of rainwater ⇒ reduces flood likelihood → promotes groundwater recharge, thereby reduces likelihood of drought → binds soil together and thus checks desertification/ soil erosion

→ provides stability to slope through binding effect of roots → reduces likelihood of landslide

② Mangroves:

→ Reduces the impact of tsunami

Ex witnessed during 2004 Tsunami

→ Reduces wind speed of cyclones and thus helps dissipate it

Ex Cyclone Amphan's damage was partly mitigated due to Sundarban Mangrove

③ Wetlands:

① Acts as cushion against high rainfall and thus checks flooding

Ex Chennai flood 2015 got worst due to encroachment on wetland

② Promotes groundwater recharge

Don't write anything this margin (इस भाग में कुछ ना लिखें)

and thus mitigates against drought

④ Coral Reefs:

① It reduces the speed and Energy of waves and thus protect coasts from storm surges/ tsunami

Ex Great Barrier Reef, Australia protects North-West Australian coast from deadly waves.

Relationship between Natural Ecosystem and hazard Mitigation is well established. Need is to protect the same by implementing Kasturirangan committee Report on Western Ghats, Green India Mission etc. to realise Disaster Risk Reduction as envisaged under Sendai Framework.

Don't write anything in margin (इस भाग में कुछ ना लिखें)

18. Explain what genome sequencing is and state the challenges in scaling up genome sequencing projects. Also, throw some light on the recently launched IndiGen Project. **(250 words) 15**

व्याख्या कीजिए कि जीनोम अनुक्रमण क्या है और जीनोम अनुक्रमण परियोजनाओं को बढ़ावा देने में विद्यमान चुनौतियों का वर्णन कीजिए। साथ ही, हाल ही में आरंभ की गई इंडिजेन (IndiGen) परियोजना पर कुछ प्रकाश डालिए।

Genome Sequencing refers to identifying order of DNA base pairs of an Organism, to completely characterise the genetic material.

Challenges

1. lack of skilled human resource
2. Lack of High computing facility
3. Privacy issues prevent large scale genome sequencing Projects
4. Poor Data Security framework
5. Adequate technology unavailable

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

Indigen project

↳ Project of CSIR to sequence genomes of ~1000 individuals

Benefits

① Helps understand Indian population's genomes

② Targeted drug development

Don't w
anything
margin
(इस भाग
कुछ ना लिखें)

Don't write anything this margin (इस भाग में कुछ ना लिखें)

19. India needs to avert radicalisation and societal dissention, as internal faultlines are a breeding ground for cyber and transnational terrorism. Discuss. **(250 words) 15**

भारत को कट्टरपंथीकरण और सामाजिक मतभेदों को रोकने की आवश्यकता है, क्योंकि आंतरिक दरारें साइबर एवं पार-राष्ट्रीय आतंकवाद का जनन स्थल होती हैं। चर्चा कीजिए।

India is increasingly witnessing Internal security challenges viz. cyber crime, Naxalism, Insurgency, terrorism etc. owing to feeling of relative deprivation among various sections being misutilised by certain Organisations.

Internal fault lines = breeding ground for terrorism

① Frustration, anger of certain individuals is tapped to radicalise youths.

Eg Certain NGOs found to recruit disgruntled youths in valley to join militancy.

Don't write anything in margin (इस भाग में कुछ ना लिखें)

(2) Terrorist Organisations like ISIS propagating their ideology to tap into societal fault lines.

Ex ISIS has given Open call to youths to carry out 'lone wolf attack' globally including India.

(3) Lack of job opportunity, poor living conditions, insecurity etc often tapped to radicalise youths.

Ex IB Report about ISI recruiting Rohingya refugees to carry out terror attacks

(4) Communal tensions / fear of minority community often tapped to radicalise youths.

Ex Allegedly ISI circulated doctored communal riot video leading to Muzaffarnagar riot

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Way Forward

① Social Media Labs (Mumbai police) to be adopted by others to scan social media to check extremism.

② Roping in Religious community leaders to check youths tapping their energy in wrong direction

③ Inclusive growth of all sections viz. schemes for minority, SCs, STs etc to check their involvement in Naxalism / terrorism etc

Don't write anything in this margin (इस भाग में कुछ ना लिखें)

20. Given the emerging security challenges, discuss why the establishment of Integrated Theatre Commands is being seen as an important defence reform.
(250 words) 15

उभरती हुई सुरक्षा चुनौतियों को देखते हुए, चर्चा कीजिए कि क्यों एकीकृत थिएटर कमान की स्थापना को महत्वपूर्ण रक्षा सुधार के रूप में देखा जा रहा है।

Integrated Theatre Command (ITC)

refers to the command having personnel from all 3 armed forces wing i.e. army, navy, air force and put under administrative and military control of single commander.

Why ITC is need of the hour?

① Emerging security challenges necessitate ITCs

- two front war possibility
- New warfare domains like cyber and space
- Increasing assertiveness of China as reflected in Doklam crisis 2017, Recent LAC conflict etc.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(2) It's internationally recognised best practise ~~owing~~ as replicated from U.S. and China's Army establishment structures.

(3) Promotes effective utilisation of available limited resources like personnel, military equipments etc.

(4) Enhances combat capability of armed forces due to jointness in planning action etc.

(5) ITC needed due to rise in requirements of disaster relief/ humanitarian crisis.

Ex Operation Neer (Maldives)
Operation Raahat (Middle East)

(6) Will help in making armed forces leaner, which has expanded exponentially leading to huge fiscal burden.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Challenges in ITC creation

1. Fear of Army domination among other two wings

2. Work culture of all 3 wings is vastly different and thus integration is a big challenge

3. Resistance from individual wings of armed forces due to fear of loss of autonomy, existing privileges etc.

Creation of office of CDS is a welcome move to facilitate creation of ITCs to address security challenges in an effective way.